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Dr B. Rush's manuscript
work on Hygiene

40

Finished Dipping
30th of Novemr
1813. Tuesday.
gave 4 lectures
on it stopd at House.

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Much has been written upon the means of preserving health and prolonging life in all Ages and Countries. Even the Poets have added their labors to those of ~~the~~ physicians and philosophers upon this subject. ~~Error Before Jonter~~ Error and enthusiasm ~~upon the opinion~~ have blended them-selves with it, as they have done with all other subjects of human ~~inquiry~~ knowledge. It has been supposed that it is possible by means of certain improvements in science, to counter-act the influence of time upon our bodies, or to repair their decay, and thus to produce an earthly immor-tality.

It ~~would be a waste of~~ will be unnecessary to contradict, ~~much time to spend a moment~~ this error. "Dust thou, and unto dust shalt thou return" is the universal & perpetual sentence inflicted upon man & from which there is no reprieve. With ~~less~~ somewhat violence to reason & revelation, ~~it has likewise~~ it has been supposed that it is possible ~~by the same improvement~~ ~~in science to~~ by certain medicines, or modes of living, to protract life to the Antidiluvian age. Paracelsus a ~~noted~~ German Chemist was the Author of this opinion. The Elixir liquor called proprietatis derives its name from its being supposed to possess this power. Many remedies equally absurd have been recommended for the ~~same~~ purpose of

protracting the ordinary limits of human life,
~~obtaining~~ a diet consisting
~~purpose~~, such as ~~bleeding in the~~
wholly of fruits, and other vegetables,
~~or of milk~~, - the exclusive use of
water as a drink, - bleeding in the
spring of the year, and the transfusion
of the blood of young animals into old
ones. They have all been tried without
effect. ~~Time (says a celebrated) is eternal~~ Not a single subject has, by their
means, nor by ~~other~~, any other
~~in any other means~~ escaped from the
empire of death. "Time (says a celebrated
french writer) is as eternal in perfor=
=ming the business of destruction, as Na=
=ture is in the business of creation; nor
can an anchor ever be thrown into
the river of life so as to arrest for a
moment our passage down its

~~over~~flowing stream." The common extent of ~~the duration of the~~ human life is from seventy to an hundred years. Very few attain to the former of those periods. One half who are born, die under puberty, and according to some calculations before the 8th year of life. This premature mortality of the human race, does not appear to be fixed by an irre-versable decree of heaven. It ~~how many~~ has been ~~be~~ prevented ~~to a certain degree~~ in many countries to a ~~and it may be prevented to a~~ certain degree, ~~in all countries~~ by the combined operation ~~influence~~ of ~~our~~ physical and moral influence upon the body and mind, and where this ~~they~~ has failed of producing the wished for success, it must

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be ascribed to the neglect of all those relative circumstances which influence diet climate, season, sex, age, occupation, and the different states of society. But the Science of health, does not extend barely to the prolongation of life. It is intended not only to prevent those painful or distressing diseases which render life a chronic death, but to make it comfortable & pleasant while we do live. It consists in the knowledge and application of certain rules with respect to aliments, drinks, air, dress, exercise, the functions of the mind, and the excretions of the body; and in diversifying them according to the relative circumstances which

✓ Begin with air - first stimulus
& food of man. some remarks
on animal life, and of health depen-
-ding on a due quantity of stimulus.

have been just now mentioned. In doing so ~~the author will~~ I shall endeavour never to forget that ~~he is~~ I am writing chiefly for the benefit of the ~~Citizens~~ inhabitants of the United States. V

Air ~~first this~~

I shall begin ~~with the history~~ by ~~usi~~ making some general remarks upon aliments and drinks, ~~and the effects they~~ and upon the times and manner of taking them, ~~affect health and life~~ and afterwards proceed to take notice of certain properties of ~~the~~ such of them as are in common use in our Country.

I shall begin ~~with~~ by making some remarks upon ~~the~~ aliments & drinks. ~~in or~~ I shall confine myself chiefly to those in Use in our Country. This part of our Subject will consist chiefly of facts; and ~~will contain but little of that reasoning~~ which ~~is so agreeable in will afford you but li~~ will I fear be considered as ~~less~~ more proper for a kitchen than a room in a University — but yet: the Subject is highly important. For 1st: aliments & drinks ~~are~~ ~~be~~ from their qualities or quantities

are the Causes of many, very many diseases. 2 our principal, our most durable, & our most ~~[illegible]~~ agreeable remedies are ~~take~~ derived from aliments & drinks. ~~And~~ & But It is certain, as necessary for a physician ~~aliments and drinks are the~~ to be acquainted with this composition ~~principal subjects of conversation~~ as of the ~~medicines~~ that are pass in ~~of~~ at ~~[illegible]~~ an apothe. shop: But 3rd you will have a better lot in life than ~~[illegible]~~ most physicians have ~~had~~ if you pass thro ~~life~~ ~~it~~ [illegible]

without sitting down at every table in which aliments & drinks, or what is called "good eating & drinking" will not constitute the principal subject of Conversation: now without some knowledge of this subject you will ~~will~~ ~~[illegible]~~ ~~it in silence, and~~

= be suspected ~~from your~~ of being ignorant of ~~many~~ other things supposed to be more useful in your profession.

It is certainly as necessary for a physician to be acquainted with their Composition, as with the Composition and doses of the articles of medicine that are prepared in an apothecaries shop. The most skilful, the most popular & the most successful physicians in all Countries have been those who have been most attentive to the diet & drinks of their patients. ~~this~~

~~Dr Sydenham owes his fame this.~~

Before I proceed to mention the different
~~kinds of aliments~~ articles which constitute
the food and drinks of man, it will be
~~necessary useful~~ proper to take notice of an opinion
of some modern philosophers who have
taken great pains to describe the gradual
manner in which man discovered
under the influence of his reason, or by
accident, the aliments which were
proper for his support. They tell us he
first fed upon the spontaneous berries
and fruits of the earth, then upon roots
accidentally discovered by openings in the
earth, and lastly upon grains discovered
in like manner by accident. They tell
us further that he acquired his first knowledge &
relish for animal food from a priest

burning his fingers in turning a piece of flesh while it was offering up as a Sacrifice upon an Altar, & then thrusting his fingers into his mouth in order to ease the pain of the burn. These opinions are as ~~altogether~~ absurd & hypothetical, ~~as those~~ as that which supposes that man advanced ~~after which a~~ ~~and class in absurdity so~~ ~~with the opinion of Dr having ad=~~ by gradual and accidental means, from a Savage, to a civilized state. The reverse of what has been taught ~~in both cases~~ is in both cases appears to be alike true, man was created a civilized being, and the first Communities of men were all civilized. They ~~become~~ gradually become savage from the loss of Religion and letters. This ~~tran~~ transi=tion from the civilized, to the savage state, is

a note

+ The Indians in this country are of this Opinion, and hence it is a common saying among them, that "White men sooner become red men, that is Indians, than red men become white!"

V the habits of civilized life, that he feeds upon the berries, fruits, and roots which spontaneously spring up upon the earth.

easy, and common; and hence the
early existence and immense number
of savage nations in every part of the
world. + In like manner ~~all~~ the diffe=
=rent ~~kinds of aliments~~ substances ~~upon~~ upon which
~~are constitute the which~~ men ~~have~~ feed
~~fed~~ in civilized life, ~~was~~ appears to have
~~been possibly~~ formed the first aliment of the
~~first family~~ father of the human race. They
were I believe pointed out to ~~them~~ him by
~~the means of~~ revelation, without ~~a~~
~~knowledge of them communicated in this~~
which he would probably have perished
by famine, or destroyed himself by
unwholsome, or poisonous products of
the earth. ~~It appears probable~~ It is in his ~~way~~ departure only from U But

V It is no Objection to this Opinion that some of the most important dis-coveries in this Science, have been made by Accident, and not by the reasoning ~~[illegible] improvements in this Science have not been derived from accidents instead of the exercise of the reasoning faculties of reason they~~ faculties of man; for what is Accident as applied to the Subject before us, ~~accident~~ ~~this kind of Accident~~, but a Subordinate Species of Revelation? A

‡ See and insert from verse 24 to 29 of the 28 Chapter of Isaiah.

A We all admit a knowledge of the existence & perfections, of the Deity to be from Revelation. It is I believe equally true that ~~all~~ the elements or first principles of all our agricultural; mechanical & domestic knowledge, as also all our forms of ~~[illegible]~~ civil Government were from the same source. Adam with ~~[illegible]~~ was taught by his Maker to make the first suit of Clothes he ever wore.

It is ~~I believe~~ further highly probable, that the manner of preparing his aliment by means of fire, so as to make it more pleasant & nutritious was communicated by revelation and that without it, he and his posterity would have been as deficient in the knowledge of Cookery as the brute Creation. ‡

It is not necessary to suppose that he was instructed in all the details of this useful art. As the knowledge of the four & twenty letters of the alphabet ~~as which was it~~ has enabled men to compose words and languages; so a knowledge of a few primary articles of ~~the elements of the~~ aliment and of the manner of preparing ~~it~~ them, has ~~have~~ led to ~~extend many the hundred discoveries upon~~ of ~~his~~ many hundred additions and discoveries upon this subject. V

~~V I Habit~~

6.1

Man is the Creature of habit with respect to his food, as much so as he ~~is so upon~~ with respect to Climate. As he was intended to live in every part of the Globe, he is happily accommodated by the nature of his appetite and ~~his stomach~~ constitution to live upon aliment varied by ~~in~~ its ~~nature~~ origin, preparation and mixture into an immense Variety of ways. Hence ~~while~~ he has been called an omnivorous Animal, to distinguish him from those Animals, that live exclusively ~~or chiefly~~ upon flesh, grass ~~and~~ or grain. There is no vegetable food of any beast, or bird but what he has eaten, ~~and~~ even ~~perhaps~~ such as are ~~[illegible]~~ rejected by other animals, have been

V prepared by him as articles of nourishment.

VI hence there scarcely exists a ~~bee~~ quadruped, a bird, fish, ~~reptile worm~~ insect, worm or serpent that has not furnished not only food, but a luxury in some ~~age or~~ Country or age of the World.

6.2 ✓ [~~T~~The flesh of the horse, the ass — the dog, and ~~many whole Raw flesh and~~ fish, ~~the flesh~~ the blood of the goat have all com=posed a part of the food of ~~all~~ many different nations. Part of those Articles of food have ~~been~~ afforded him not only nourishment, but a feast in their putrid State. Of this there are some remarkable instances mentioned in the transactions of the transactions of the Society of Philadelphians which flourished some years ago at Dis~~sociata~~] The same Versatility of appetite and dis=position to habit, appear in the facility with which ~~our species~~ he accommodates his taste to different kinds of ~~vegetable~~ animal food. Of this, history and travels furnish us

V pleasure and nourishment to the ~~to~~ appetite and body of man when taken without the least mixture of any other article of diet.

with many remarkable instances. ~~While~~

But it belongs to the influence of habit upon the appetite ~~of man to~~ and constitution of man to ~~derive~~ ~~be gratified exclusively by an animal or~~ impart pleasure and health from a Diet ~~not only~~ ~~animal~~ not only exclusively ~~animal~~ ~~or~~ vegetable or animal, but from many ~~a~~ single Articles in those kingdoms of nature.

Of the former, ~~This has been~~ ~~there have been~~ travellers ~~the flesh of the horse,~~ the ~~the flesh of the deer or~~ tell us ~~fish~~, - Rice - beans ~~buffaloe~~ dates - gum Arabic, and ~~the~~ ~~oxen~~ ~~flesh of~~ and of the latter, fish, & Cinnamoners; ~~during a hot ... time~~ the flesh of the horse, the ass, the Deer and ~~of the ...~~ the buffaloe have all afforded ~~not only an~~ v

However powerfully habit may act in these cases in perverting the original instincts of nature, and substituting an artificial appetite in their room, there can be no doubt but ~~that~~ that ~~man was~~

~~intended to live upon some Aliments~~
~~use more calculated to afford pleasure &~~
~~health to man than Others, and that~~

Man ~~he~~ was intended to live upon a mixture
of the ~~the~~ Vegetables and animal ~~and~~ food,
and that certain Articles of both were
selected in a more peculiar manner
~~for~~ his Use, ~~as~~ being more easily
obtained, and more calculated to afford
~~please~~ him pleasure & health than
Others.—

That man was designed to live
upon a mixture of vegetables and Animal food is
obvious 1 from his ~~an~~ instinctive relish for them.
2 from the Structure of his teeth, and of
his Alimentary Canal, both of which
are formed upon the Compound prin=
=ciples of Granivorous & Carnivorous

V From the greater health, strength and longevity of individuals, and nations who live upon a mixture of vegetable and animal food.

4

7.

animals.

3 From a diet consisting of ~~either~~ but one of them ~~producing bad~~ being un-friendly to health, and longevity. ~~than a diet of~~ this it would be easy to produce many proofs. ~~the~~ vegetable aliment alone disposes to ~~stomach~~ & bowel complaints, ~~&c~~ to the diseases which arise from a want of ~~off~~ ~~[illegible]~~ Diseases ~~which arise~~ ~~Strength~~ proportioned to labor, ~~from a want of strength~~, & to premature old age and death, while a diet consisting ex-clusively of animal food, disposes to malignant fevers - Scurvy, and eruptions on the skin. ~~and~~

5 ~~4th~~ Lastly, ~~it is obvious from~~ these suggestions of reason and experience in favor of a diet consisting of a mixture of vegetable and animal food are ~~[illegible]~~ sanctioned by ~~Revelations~~ positive commands, as

~~The~~ One of the final Causes of probabley was, had man lived on Vegetables only, it would have acquired ~~[illegible]~~ a greater quantity & longer time to fill his belly than was compatible with his duties in life.+ His ~~It was~~ ~~Thus~~ appetite for flesh serves the further purpose of ~~to~~ lessening the ~~[illegible]~~ ber of Animals.—

+ this is the case with all herbivorous animals —

well as by the
~~the old and new testament and by the~~
examples of ~~the~~ all the wise and good
men whose lives ~~and laws~~ are recorded
in ~~those~~ the old & new testaments. ✓

Let it not be supposed there is any
Cruelty in ~~Thee~~ the governor of the
world in permitting the life of one
Animal to be supported by the death
of another. The Command to "slay &
eat" like every other Divine Command is the
effect of overflowing goodness. for by
the ~~death~~ Constant destruction of every
Animal that supplies us with food, many
room is given for the existence of
more ~~who~~ that come forward & partake of
the blessing of life. It is by this means
that the various Species of Animals have
been preserved alive to this day. for had

not their increase been ~~beyond~~ limited by their partial destruction, they must all have perished in consequence of the present ~~imperfect cultivation~~ scanty productions of the earth, from the want of subsistence long ago. If all the domestic animals alone which have existed within the last hundred years are taken into consideration, the number of them almost exceeds calcu-
-lation, and yet no one of these would ever have seen the sun, or partaken of those animal pleasures which they probably enjoy in a much higher degree than the human species, ~~and which constitute with them a degree of happiness proportioned to the absence of other pleasures~~] Unless the ancestors of

its nature,
∨ Strangers to ~~the~~ ~~nature~~ ~~its fear~~
∨ and Consequences, and of Course
to its fear; ~~—~~

those animals ~~have~~ had composed a
part of the food of man. But further,
the destruction of animals by the knife,
or in any other way, prevents death from
~~death~~ disease. It likewise prevents their
~~miseries~~ suffering the miseries of old
age, for in that feeble and helpless stage of life,
they can have no ~~help~~ aid, nor support
like the ~~creatures or man~~ human Species
from affectionate and interested relati-
-ons and friends. From their ~~ignorance~~ inability
however, ~~they are strangers to the fear~~
~~of death, they are probably ignorant~~
~~of its nature~~, ~~hence the aged~~ ~~brute~~
~~their inability~~ to draw inferences from
the death of other animals so as to apply
it to themselves, they are probably ~~ignorant of its nature~~ hence the hare which
is exposed ~~more~~ so ~~frequently, others~~ frequently to death from
the number of its enemies is the

V It is from their ~~want of~~ inability to remember the ~~circumstances~~ means or instruments ~~which~~ ~~produce~~ of death in other animals, ~~this fellow birds~~ ~~abroad~~ ~~their~~ ~~passage of~~ ~~out of the woods~~ that they ~~never~~ do not destroy themselves. Under all their complicated sufferings from the neglect ~~and~~ Cruelty of man, they never resort to Suicide for deliverance from them. ~~to the crime of Suicide~~

VI That we seldom tread upon the earth after a shower of rain, or inhale the air, or swallow certain liquids without des=troying the lives of many of them, ~~some old~~ ~~scores~~ of Quere? to all of whom life is probably as precious and ~~posses~~ ~~as much feeling~~ ~~as full of~~ more full of enjoyment than the ~~and suffer as much in dying as the~~ Domestic animals that are the objects of our misplaced Compassion.

9-1

most playful of all Animals. The lamb too from the same cause, is "– pleased to the last, & hence – he crops his food, "and licks the hand just raised to shed ~~the~~ his blood." Even while Animals are dying, it is probable they are not conscious that their ~~passion or~~ loss of blood is a previous step to the loss of their existence. ~~they~~ In most cases I believe death creeps upon them with the gentleness, and perhaps with the pleasant sensations of sleep. –

Were it necessary to oppose any more ~~urge further~~ arguments to the inor, and morbid sensibility of mind which object to taking away the life of ~~an~~ innocent Animals in order to gratify the appetite, and nourish our bodies, it might be added that we live necessarily in a constant state of war with thousands of Animals, and it

V This stimulus acts by its weight, or by distending the stomach, ~~and~~ or by ~~it~~ an ~~acid~~ active or pungent quality inherent in it in which case it acts likewise thro' the medium of the organ of taste. 2ᵈ.

~~It~~ ~~and~~ 2ˡʸ by the facility, or difficulty with which they are digested, and the prompt or gradual manner in which they yield their nourishing matter to the body. It is,

~~It~~ ~~It is~~ not necessary for aliment to digest speedily in order to support ~~the~~ strength and life. On the contrary there are cases ~~to~~ to be mentioned hereafter in which aliments should be preferred from ~~the slow its~~ their difficulty of digestion, and the slow manner in which they pass out of the stomach.

U sugar occupies the first grade in this scale of nourishing matter - oil the next, and mucilage the lowest. Aliments =

support animal life
Aliments of all kinds ~~act in three ways~~:
in the following ~~by their in two~~ Ways. 1 ~~Directly~~ ~~by~~ by their Stimulus
independantly of their nourishing qualities,
imparted to the whole System through the
medium of ~~the organ of taste &~~ the Stomach.
2 ~~Indirectly by~~ ~~By~~ the quantity of nourishment ~~they~~
~~contain, and by the greater or less facility~~
~~with which this nourishment is extracted~~
~~from Aliment and by the powers of the~~
~~Stomach, and converted into Animal matter.~~
~~All~~ Aliments ~~of one~~ derive their nourishing qualities ~~in propor-~~
from their containing more or less of the ~~substances~~ following ~~matter~~
~~tion to the quantity of the~~
Substances ~~contained~~ in them. ~~and in the order in~~
~~which they are mentioned~~. ~~a~~ Sugar & oil
& Gelatin, Gluten - Starch - Gum - ~~and~~ ~~albumen~~ ~~&~~ mucilage. ~~They~~
are said to contain in addition to those
substances Calcarious earth & ~~some~~ Carbon
each of which it is said contributes in

~~V Scale of nourishing matter & oil the~~

~~waste~~

V They contain likewise and ~~an~~ alka-
-line & muriatic salts - a principle of
rancidity and putrefaction and a quantity
of air. ~~what~~ [from which]

in certain degree to ~~from~~ their nourishing qualities. ~~Sugar occupies the first grade in this~~ ~~that the order of in which they ought to be placed~~ is not known.

~~It will be impossible to class aliments~~

~~by their~~ The stimulating - nourishing, ~~&~~ & indigestible digestible qualities of aliments ~~for these~~ are so mixed, ~~or~~ so much influenced by their mode of preparation, or by ~~the~~ age, and the state of the stomach of the persons who feed upon them, that it will be impossible to class them, in giving a history of their relative fitness for the support of animal life. — ~~The~~ ~~best are~~ the ~~aliments to which nat by~~ ~~their characters ... ~~ I shall therefore occasionally mention all, or a part of their qualities, ~~b~~ by the terms that have been mentioned, and apply them to circumstances, ~~and~~ & to the ages and ~~habits~~ constitutions of different classes of people. —

& and which induces in it what has been called the panarous fermenta=
=tion.

The vegetables which constitute the nourishment of man have been divided into grains - roots - seeds - ~~nuts~~ nuts fruits ~~fruits~~ - potherbs & and sallads. —

The grains ~~most~~ commonly employed as aliment in the United States are Wheat, Rye - Indian Corn, Barley - Rice ~~Rice~~ - and Oats.

Wheat is used chiefly in the form of biscuit and bread. The former requires more mastication than the latter, by which means it is not only more divided, but carries more of the saliva into the stomach and thereby faci~~litates~~ its digestion. It imparts more strength to the body than leavened bread.

Bread is made with flower and water, leavened ~~elevated~~ by means of fixed air conveyed into them from yeast, or any other matter that contains it, — It contains a

great quantity of gelatinous matter upon which its nourishing qualities chiefly depend. It is most wholsome when taken cold. Fresh or hot bread, is ~~not~~ difficult of digestion, and accor=
=ding to Linnaeus is injurious to the teeth.

It is sometimes made with milk instead of water, and eggs, sugar, honey and butter are occasionally added to the flower of which it is composed, but all these additions detract more or less from its wholsome qualities as a daily article of food. That bread is best, which is ~~not too much baked, that~~ made of full ripe wheat — ~~that~~ of fresh flower — that is [illegible] sufficiently

elevated, or fermented — that is well baked,

that is neither moist, nor dry, and

that has neither a sour ~~[illegible]~~ taste, nor

smell.

Rye affords a bread, less disposed to become

dry than wheat, very nourishing, and

disposed to move the bowels gently especially

when it is not very finely bolted. A

pleasant bread is made of equal parts

of Rye and wheat flower. ~~The~~ Rye

flower when boiled with water forms

an excellent Aliment called mush which

is ~~[illegible]~~ ~~pleasant~~ both salutary and agreeable to invalids

~~[illegible]~~ taken with milk, or with a little

butter and sugar, or molasses.

Indian Corn is a wholsome & very

nutritious grain. It is used when green,

~~[illegible]~~ roasted or boiled, upon the Cob, or grated

very fine, and baked with Cream or
milk into a pudding, and afterwards
mixed with a little butter & salt. The
Indians in this country mix equal parts
of the green Indian Corn dried by means
of heat, and maple sugar together, ~~and~~
in which state ~~they~~ preserve it for
years. They [generally] ~~eat it~~ [prepare it for] ~~mixed with a little~~
food by boiling it in water, but ~~hot~~
~~cold water~~ when they go to war, ~~and~~
~~at home they boil it~~ they mix it with
cold water, and use it ~~in a liquid~~ as
a drink.—
Indian Corn is ~~used~~ [prepared] likewise ~~in~~ [for]
~~in the green~~ food by having its husk
taken from it ~~in which state it is~~
~~called~~ and afterwards boiled ~~with meat~~ [in milk or with]
meat. In this state is is called Hommony.
It is called small hommony when the

& a light and ~~pleasant~~ wholesome gruel, for invalids is Ob-
-tained ~~from~~ by boiling the flinty part of
the corn in water, and afterwards
straining it, and making it pleasantly
~~a mixture with~~ adding to it
a little sugar ~~of~~ wine, or lime juice.
It is less nourishing~~est~~ than the
farina of the corn. Excellent ~~Sub~~-
-~~stitutes for Buck wha~~ cakes resembling
in their appearance Buck wheat cakes,
but of a more nourishing quality are
made by mixing four parts of Indian
flour with one of wheat flour, and ad-
-ding a little yeast to them in order to
raise or lighten them. They are
afterwards baked, and eaten like buck-
-wheat cakes.

grains of Corn are broken in preparing
it. It is further, ~~made into~~ when
reduced to a fine powder ~~made~~ into what
is called mush Pone - Johnny Cake, and a
pudding, ~~the last~~ all which form
an agreeable & wholsome aliment.
Persons who feed upon this grain in
any of the ways it in which it is prepa=
=red are capable of ~~great labor~~ greater
perseverance in labor than ~~from the~~ persons who live
~~use of~~ upon any other grain. An excellent
~~Rice is a simple and pleasant~~
bread is made of equal parts of wheat
and Indian corn flower. It retains its
moisture longer than wheat bread
alone, and it is gently opening to the
bowels. — v

∨ It is much improved by previously grinding the rice into a coarse powder.

worse but useful to purge.

Rice is a wholsome & ~~agreeable aliment.~~ nourishing grain.
Whole nations live upon it. & ~~It is~~
when boiled in milk. it forms a
~~used in the in puddings~~, ~~and boiled with~~
pleasant aliment for Children. It
makes an agreeable pudding when
mixed with milk and eggs. Raisons
are sometimes added to this pudding,
but a handful of dried peaches imparts
a more ~~agreeable~~ pleasant taste to it.
It is sometimes ~~used~~ boiled & used in
its simple state, ~~instead of~~ with meat
instead of bread. It forms a useful
ingredient in broth, and ~~it is~~ a pleasant
Drink for sick people labouring under
relaxed bowels when boiled in water. It
is rendered more useful for this purpose when moderately
~~There is It was~~ the grains of Rice
roasted. are sometimes reduced to a fine powder

v a pleasant bread may be made of Rice by ~~ea~~ mixing it with potatoes, or by adding a 5:th part of Wheat flour to it. The latter addition with a little yeast forms a cake superior when eaten with butter to the Buck Wheat Cake.

by first boiling them, and then pouring
off the water in which they are boiled, &
afterwards placing the vessel well covered
over a slow fire. The small portion of
water which they retain is by this
means ~~converting~~ converted into vapor,
which divides and ~~reduces~~ pulverizes the grain, ~~to~~
~~a f~~ ~~It is~~ In this state it is eaten with
milk, or with a little butter & sugar.
~~Barley is scarcely used~~ There is not the
least foundation for the opinion that
Rice is injurious to the eye sight.
Barley is seldom used in bread. It is a
pleasant ingredient in broth: ~~whether whole,~~
~~or husk~~ Its use ~~as a~~ in making beer shall
be mentioned hereafter.
Oats is used in this Country ~~as aliment~~
for sick people only & in the form of
Gruel, ~~It is the lightest, easy of digestion~~

V The meal of Buck wheat is used in this country only in Cakes with butter. It is in this form ~~and~~ moderately nourishing, and when not overloaded with butter easy of digestion. Mr Barrow says the Chinese ~~make~~ make use of a paste ~~for~~ prepared from it which is as white as snow.

It is happily suited for this purpose from its being easy of digestion & affording but little nourishment. When infused in water and suffered to stand till it becomes sower, and then strained and evaporated, the residium forms that aliment which is called sowens. It is cooling, and pleasant eaten with milk, or with sugar and butter. ✓

The Roots most commonly in use as aliments in the United States are the potatoe ^ turnip ~~the~~ carrot - parsnips - beet - and onions.

The potatoe contains ~~in a given quantity~~ one third of the nutritious matter of wheat bread in a given ^ quantity of each of them. It is ~~mild~~ ^ pleasant and wholsome vegetables. It is eaten boiled, and roasted. ~~When it~~ It improves ~~the taste and~~ the wholsome qualities of wheat, ~~bread~~ whether made into bread or cakes, ^ and renders the paste

v The potatoe may be preserved in long Voyages and in hot climates by being previously heated in an oven to such a degree ~~only~~ as to destroy its principle of Vegetation. When pared, and cut into small pieces and eaten raw, with Vinegar, it has been found an effectual remedy in curing the Scurvy. [the Indian or sweet potatoe. For another prepn of it - see p: 249 of common place book 1809] ~~It makes a pleasant soup when 3 parts of it are boiled with one of Onions and a little bread. It must afterwards be~~

an apple
of ~~a~~ dumplin or pudding, when mixed with an equal quantity of wheat flower, ~~light~~, spongy, light, and easy of digestion. Sir John Sinclair directs them to be prepared for food by being first half boiled, and then roasted, or by being first scraped so as to open a communication through parts of the skin and the external air, then boiled in a little less water than will cover them, and afterwards exposed to a gentle heat until ~~they are completely~~ all the moisture ~~they~~ was evaporated from them. He directs further, and for an obvious reason, that potatoes of the same size only should be boiled together. V

Turnips are less nourishing than the potatoes, but when roasted or boiled

✓ They are depsived ~~by~~ of thier bitter taste by first ~~boiling or~~ infeesing them for two or three hours in Cold water, and pairing away a larger portion of the Skin that is commonly done in the ordinary way of ~~dressing~~ cooking them

~~= strained and eaten with a little toasted bread after being first made savoury with a little salt.~~

 V

constitute an agreeable & wholsome Aliment.

Parsnips Carrots & beets contain more ~~nour~~ nutriment than the potatoe or the turnips in a given quantity. This has been decided by an experiment with respect to two of those vegetables. Two pigs of the same age were weighed on a certain day. The one was fed upon parsnips, and the other upon potatoes. At the end of a month, the one that was fed upon parsnips had gained several ounces more of weight than the one that was fed upon potatoes. [All the roots mentioned under this head re=
=quire the long application of heat to render them easy of digestion.] The parsnip is much improved in its ~~ta~~ taste, and wholsome Qualities by being placed a few

the addition of salt or

& savoury by boiling in a piece of salted

meat in them. Their consistence may

be varied by the greater or less quantity

of water in which they are boiled.

A piece of soft bread boiled in them renders them more

~~glutinous~~ grateful to some stomachs &

helps to give them the consistence of

soups. They are eaten with dry ~~toast~~ bread.

They are rendered more nourishing by a

~~few some ounces~~ a little butter ~~may~~

being ~~be~~ thrown into them, or by an egg

well beaten up in the water ~~the~~ boiled in them.

minutes in a frying pan or upon a grid=
-iron over a hot fire, after it is sufficiently
boiled.

Onions ~~belong alike to the roots~~ afford
but a moderate portion of nourishment,
but by their stimulus they impart strength
to the body. They are excellent articles of
diet for Labourers. ~~and~~ From ~~from~~ the longer ~~or by~~ their condi-
operation of ~~they~~ upon the body, they are
=al qualities ~~suffering~~ ~~are~~ ~~for~~ preferable
to ardent Spirits which are too often resorted
to by that class of people. They constitu=
=ted a principal part of the aliment of
the Children of Israel while they worked
in the hot and enervating climate of
Egypt. They form a necessary part of all
~~the~~ vegetable soups. One 3d of onions imparts
to potatoes Barley - squashes - pease - beans &c the flavor
of animal broths. They are ~~It is~~ rendered ~~still more~~

V The disagreeable smell which the Asparagus imparts to the Urine &c which is an objection in some people to eating it, is completely obviated by taking a pill or two of what are called the tears of turpentine. which ouze from pine boards when exposed to the heat of the sun. A few drops of the spirit of turpentine would answer the same purpose.

V The bean whole nations have made a principal part of their food. It is was a common article of diet among the Jews: the Romans were much attached to them. The Chinese make a bread of them by first pounding or grinding them, and then stirring them with water. the water is poured off while impregnated with the powder of the beans, and suffered to stand till it deposits this powder. This water is =

15

~~of the seeds pease~~ Pease, beans ~~constitute~~ compose the principal classes of aliments that are taken from the seeds. [They require to be well boiled in order to be nourishing, and easy of digestion.] The pea when dried ~~in~~ ~~its~~ and preserved in its green state retains during the Autumn & winter a good deal of its pleasant taste. When boiled in milk & water with a little flower & salt, and a slice of bread ~~it~~ it forms an agreeable vegetable broth. ~~when dried~~ In its dry state, it is an excellent ingredient in soop. The different kinds of beans are used in the same way ~~and~~

~~The profusions of~~

Of the potherbs, Spinach, — Asparagus, — ~~&~~ and ~~the~~ the different kinds of Cabbage, are chiefly employed as articles of diet in the United States. ~~The last is offensive to the stomac~~ It is to

= then poured off, and the ~~water~~ sediment when
dry is seasoned ~~——~~ with a little salt,
and cut and eaten as bread.

~~All the vegetables that have been mentioned~~
~~are easy of digestion in [illegible] should be well~~
~~boiled in~~ There has been a good deal of contro=
=versy upon the manner of preparing all the
vegetables that have been mentioned for the
table. It may be settled in a few words. When
vegetables are well boiled they are most easily digested, and of
course are most fit in that state for persons
who lead sedentary or easy lives. But the less
they partake of the action of the fire, the
less easily they are digested, and of course the
more fit they are for men who labour for
their subsistence. By lying long in the stomach
they stimulate the whole body & keep off hunger.
Half baked bread is often eaten by the peasants
in Russia, and half boiled potatoes are eaten
by the poor people of Ireland for this purpose.
The Farmers imitate ~~their~~ this practice in

be regretted that ~~the root~~ Cabbage which is so gene-
-rally agreeable to the taste, is so often of-
-fensive to the stomach. It is least so
when it is raised in poor ground, and
after it has been exposed ~~a few weeks~~ to
the frosts of November or December.+ ~~It has~~
Its offensive qualities to the stomach are like-
-wise much lessened by boiling it by itself for
a short time, or by suffering it to infuse
for ~~two or three~~ twelve or fifteen hours in water
a little below the boiling point. There is a
wholsome aliment prepared from Cabbage
called Sour-crout.+ add how preserved also-
beans - preserved by salt & drying &c.

= feeding their horses & cattle. When they wish to fatten them, they ~~give the~~ boil the roots & grain they give them, but when they wish to derive the greatest advantage from their labor, they give both in a crude ~~state~~ or raw state.

~~They have been divided into such are acid - as the currant - the citron & into such contain a mixture of saccharine matter with an acid as the orange - the apple, the pear and the peach - the plumb the cherry - the strawberry - the grape, the mulberry - the gooseberry &c -~~

They are acid as the Currant lemon &; ~~and lemon~~ sweet as ~~the~~ certain kinds of plumbs oranges, apples - &; a compound of acid, and saccharine ~~sugar as~~ matter as the cherry & the strawberry; a compound of saccharine matter & water as the melon; - a compound of saccharine and astringent matter as the quince & the persimmon, and oily as the walnut, almond - ~~the~~ cocoa - and ~~the~~ hickory nut. ~~and~~ they are all nourishing in proportion to ~~the~~ quantity of sugar & oil they contain.

The ~~fruits~~ the United States abound with most of the fruits of all the climates in the ~~middle and northern~~ world. From the profusion of other aliments ^fruits ~~they~~ are used chiefly as ar-
-ticles of luxury in the United States.
~~They all abound in saccharine matter, and contain~~
~~when ^ perfectly ripe, and not [illegible]~~
~~a good deal of nourishment.~~ ~~They~~ are
~~Putrefaction begins in them~~
~~moderately nourishing; and let~~ When
taken in moderate quantities they do
not disorder the stomach or bowels. To
ascribe to any part of them the
Diseases of Summer or Autumn when
taken perfectly ripe, and in a sound
state, is as absurd as to ascribe the
yellow fever, to the ships which arrive
~~[illegible]~~ from the West Indies in our

V the Strawberry requires sugar,

V ~~those~~ Some of the melons require pepper and salt, and the Cucumber requires ~~pepper~~, salt, Vinegar and Oil to render them agreeable to the Appetite, and easy of digestion.

Should be eaten before dinner

V Some of them retain ~~a part of their~~ flavour when preserved in sugar and spirits, as the Strawberry, and the peach. While others of

filthy harbours in the months of August
and September. The Coincidence of Disease
~~this~~ those supposed Causes, is ~~altogether~~
with ~~the summer fruits and the arrival of~~
~~things is~~ accidental in both Cases. Instead
of abstaining from ~~them as or unwholesome,~~ fruits
~~they should be taken~~ from a dread of their
creating Diseases, they should be taken to
prevent them. They obtund acrid bile,
and discharge it gently from the bowels,
and thus lessen the heat of the body in
summer. ~~they~~ Some of ~~them~~ the fruits retain
their qualities when dried. This is the
case with the apple and the peach. ~~some~~
~~of~~ them afford a Juice from which a Wine
is obtained. ~~This~~ The Currant & the Rhasberry,
are oftnest used for this purpose. ~~while~~
~~Others~~ The acrid and sweet fruits are rende-
-red less fermentable by being baked, or by
~~being or~~ by being mixed with milk-cream
sugar, or ~~wine seen~~ old Wine.

The Sallads are likewise rather articles of luxury than of Aliment. ~~This commonly Stated,~~ They ~~are eaten in their not subjected to~~ Do not require the action of fire ~~before they~~ to render them agreeable. The commmon Salads endive, ~~&~~ Dandelyon ~~cr~~ cold slaw ~~Scurvy~~ grass, and Celery belong to this Class of Substances employed in diet. They require certain additions as vinegar, pepper, and mustard to render them palatable and Stimulating to the Stomach. They contain but little nourishment.

~~Among~~ the profusion of the ~~ali~~ vegeta=ble Aliments in our Country that have been mentioned Nuts are seldom employed as Articles of diet. The almond - the filbert, ~~the~~ Walnut - the hazel nut - the ~~filbert~~ hiccory nut, or Shell bark & the Chesnut compose a part of the desert, After our meals. They are ~~no~~ too

✓ Chocolate forms a pleasant nourish=
=ment either boiled in water, or
eaten by itself. ~~which~~ The almonds
~~with~~ ~~afford~~ when blanched, that is
deprived of their ~~bitt~~ Skin by being infused in hot water, – then bruised
with loaf Sugar and mixed with warm
water, afford that pleasant bland liquor
called almond milk, which has often
been prescribed with Success in pulmonary
Consumption. It may be used as a Sub=
=stitute for cream or milk with tea &
Coffee. ~~or tea~~

nourishing to be taken in large quantities
in this way. From one half of a single hiccory nut
pressed between two pairs of hot irons,
I once obtained thirty drops of Oil; now
Oil we know occupies the second grade in
the Articles ~~of~~ which afford nourishment
to the body. The Chesnut when dried, makes
an excellent ingredient in Soop. When
eaten soon after they fall from the tree they
are said to affect the head. ~~with~~ Dr Cabanis
says a priest in France informed him,
that the members of his parish were
instructed with more difficulty at the
time they fed upon raw and ~~ne~~ newly
collected Chesnuts than at any other time.
Dr Hoffman has remarked that Dysenteries
are most common where people feed chiefly
upon Nuts. The Cocoa ~~nu~~ when mixed with
flower, ~~all those~~ ~~and~~ butter or Sugar into what is called V

Avial
✓ or terrestial – Aquatic – & amphibi=
animals,
=ous also Insects & worms.

Animal food includes Quadrupeds, and birds (Domestic and wild) ~~fish~~ fish, ~~&~~ fish - shell - and scaley - certain Amphibious Animals, insects & worms ~~and fish and fish~~. They are nourishing in the order in which they are arranged.

The Domestic Quadrupeds most commonly used in diet in this country are the Ox, sheep, & hogs. The wild quadrupeds are chiefly ~~animals are known~~ the deer, the hare and the squirrel, & the rabbit, which afford aliment to the inhabitants of the United States. ~~The~~ The domestic birds are the fowl, the turkey, the goose, the duck and the tame pidgeon.

The wild birds are the wild turkey - the wild goose - the wild duck - the wild pidgeon the pheasant, the partridge - the grouse - the plover - ~~an~~ the reed bird and a few more not worth mentioning.

The amphibious animals which ~~admi~~ occasionally ~~nister food to our~~ cover our tables are the turtle, and the frog. The former is eaten in soup. The hind legs of the

~~I have divided fish into those that~~ ~~Fish~~

~~Fish include those~~

~~Under this~~ Under the head of fish I shall include ~~the oyster~~ ~~the~~ the Lobster, the Crab, the Oyster & the Clam, as well as the fish that swim in ~~to~~ the water. They differ in their qualities according as they are taken in fresh or salt water. the ~~latter~~ former are more easy of digestion than the latter. They differ further according as they are taken in ~~running~~. or stagnating Water. the latter are less digestible than the former. ~~In point of solubility in the stomach, and nourishing qualities, they possess an intermediate degree between~~ vegetables and land Animals. ~~and the~~ whole nations have lived chiefly upon them. In Countries near the poles they supply the scanty ~~ve~~ vegetable productions of the earth, and ~~the~~ in tropical Climates they afford an aliment ~~suited to the~~ procured with but little labor, and of Course suited to the

indolence which heat induces upon the body.

They form in point of solubility in the stomach, and nourishing qualities ~~an~~ intermediate Aliment be-
-tween Vegetables and land Animals. ~~being~~
~~more digestable & nourishing than~~ They are
more nourishing than the former, and less
so than the latter. hence they are prescribed
to invalids, and to convalescents from acute
diseases. The shell fish contain less nourish-
-ment than the scale fish or those that swim. Lobsters and
Crabs ~~nourishable~~ are less nourishing than
Oysters and Clams. It is a custom of the
~~that~~ Christian Church to enjoin the use
of fish alone ~~as~~ with vegetables as a diet
during the season of ~~Lent~~ which includes
forty days ~~during~~ of the Spring months. This
institution is a truly wise one, and should
have been retained by those sects that
separated themselves from the Church of
Rome. Its advantages are; it reduces the
Quantity of nourishment taken into the

body, and consequently lessens ^plethora and^ the predisposition to inflammatory diseases at a season when they are most apt to prevail. ~~It does~~ It has this effect not only from the less quantity of nourishment conveyed into the body, but from the diminution of appetite which the same food taken for a long time generally creates, and 2 It relieves us from the necessity of feeding upon land animals ~~when they~~ at a time when they are propagating their species, and of course ~~less fit~~ when they are ~~not fit~~ ~~less fit~~ ^less proper for aliment.^

The _Amphibious_ Animals which occasionally cover our tables are the turtle & the frog. The former is eaten in Soops. The hind legs of the latter only are eaten. They ~~afford but little~~ ~~nourishment~~, are pleasant ~~veh~~ vehicles for the seasoning that is used with them, for they afford but little nourishment.

latter only are eaten. They are considered as a highly delicious ~~kind~~ food. —

Happily for the ~~inhabitants~~ citizens of the United States: the ample supply which it hath pleased a bountiful Providence to afford them, of the numerous ~~an~~ and pleasant articles of food which have been mentioned does not render it necessary to have recourse to the insects or worms of our Country for sub=sistence. —

I shall take notice of fish as an aliment after delivering some general remarks upon the relative salubrity of the ~~relation to~~ ~~mode of~~ ~~the~~ ~~preparing~~ & ~~preserving~~, ~~and~~ ~~the various~~ classes of land animals that have been mentioned, ~~&~~ ~~and upon~~ ~~and upon this~~ their ~~relative~~ ~~salubrity of~~ and upon the manner of preparing and preserving them. —

19.

The ~~Solubility~~ Stimulus of animal food in the Stomach, and its Solubility also ~~and~~ its subsequent nourishing and wholesome Qualities depend upon the following Circumstances.

1 The Sex of an Animal. The females of all animals are more tender, and easier of digestion than the males. ~~Ani=mals that have lost their Virility are~~

~~likewise~~

~~2 Animals that have lost their Virility are easier of digestion that those that those~~

2 The State of an Animal with respect to Virility. ~~The~~ Oxen, weathers, and Capons are easier of digestion than the bull, the ram and the Cock. –

3 The Age of an Animal. Adult Ani=mals are more Stimulating, & digestible and afford more nourishment ~~easy of digestion~~ than young Animals. Beef and mutton are in their most perfect state when.

v ~~no difference fish~~ - there is no difference
~~with respect to its~~ between young and old
fish, with respect to its digestible & nou=
=rishing qualities.

~~[illegible]~~ .

v every part of its flesh, more so
than its heart liver, kidneys, and intestines.
The brain, feet and lungs afford but
little nourishment.

Birds predilection - as of the Sinclairs
Defects. Raven Eagle

they are about five years old. Old beef may be distinguished from ~~young~~ that which is young, by its fat being diffu=
=sed alike through every part of its flesh, whereas in young beef the fat ~~is there~~ is more confined to particular places. ✓

4 Upon the Class, and Species of Animals. wild animals are more easy of digestion, than Domestic, ~~the turkey and the fowl~~ Beef and mutton are digested more easily than pork, and the turkey & fowl more easily than the goose, and the Duck.

5 upon the ~~[illegible]~~ parts of animals which are the objects of aliment. The ~~legs~~ Loin of Beef is more digestible than other parts of its flesh, & ~~the legs of birds & domestic~~ wild birds are more easily digested than their wings from being less hardened by constant exercise.

6 The time and manner in which Animals are prepared for the slaughter house. Animals that are fattened gradually, and that partake of exercise afford a more ~~are more~~ strengthening aliments ~~easily of digestion~~ than Animals that ~~are~~ are stall fed, and fattened suddenly. The ~~superior~~ excellency of the Irish beef depends upon its feeding for two years in pasture where they have plenty of food, and room to exercise their limbs before they are killed. ~~They are~~ All animals are most wholesome when their food is most abundant. The Pork is insipid in Summer, compared with what is in the Autumn when those fruits and nuts abound upon which it delights to feed. ~~The bird~~ Animals ~~afford food~~ ~~the least wholesome~~ food during ~~the time~~ in

alimment in wet than in Dry
Sheep thrive most in Dry
Seasons, ~~the less moist, the more~~
weather,
~~delicious the mutton in all coun-~~
~~-tries~~, provided ~~it does so~~ there be rain
enough to ~~prevent~~ keep up the
vegetation of the grass.

11 Sheep that have lived upon moun-
-tains afford a more ~~whole~~ strengthening ~~digestible~~ Ali-
-ment than those live upon plains. Their
flesh is improved by their greater
exercise, and by breathing mountain
Air.

~~which propagate their Species~~

7 upon the Season in which they are killed. All animals are ~~less whol~~= [are ~~more or less~~] more or less unwhol= =some in the Spring at which [time] they ~~the~~ propagate their Species. ~~than in the~~ ~~Winter, and~~ they are ~~and~~ less whol= =some likewise in the Autumn ~~than~~ than in the Winter from the influence of ~~the~~ Summers heats upon their blood and flesh. mutton is less fitted for

8 upon the place in which they have been ~~fall~~ fattened. Animals that have fed during the Summer ~~up~~ in [or near to] marshes, are often affected with obstructions & Abscesses in their livers from the same kind of exhalations which pro= =duce bilious diseases in the human Species. Animals fed upon the grass

and grain which are forced by the ma=
=nure of large cities, are less fitted for food
than those which ~~as~~ derive their flesh
& fat from the pasture and grain ~~that~~ of
ground that has not ~~been~~ not felt the ~~manured~~
influence of stable manure.

9 upon the exercise they undergo previously
to being killed. The quicker ~~[illegible]~~ digestion of
wild, than domestic animals is occasioned
~~[illegible]~~ by their being more exercised in run=
=ning & flying. Art has imitated nature
by introducing the practices of bullbaiting,
Cockfighting and the Chase in order to pro=
=duce a similar tenderness in the flesh
of domestic animals. A fowl is ~~always~~
~~more~~ rendered more digestible when
chased for some time before he is killed.
The flesh by these exercises, ~~acquires~~

V 10 upon the food upon which Ani=
=mals have been fed previously to
their killed. The hog affords a more
wholsome aliment when he ~~fed~~ feeds upon
acorns, and grain, than when is fatted
by the Swill and offals of a kitchen.
The flesh of the deer in England is pre-
=fered to the flesh of the wild deer in
America from its feeding upon the Thyme
which grows in the parks in which
they are kept. they are best in dry seasons—and when they feed upon short grass.—

the black Color from which wild
Animals have Obtained the name
of black meats. From the quick
digestion of wild flesh, and the ~~debility~~ speedy
return of appetite and debility After=
=wards, the ~~in~~ settlers in new countries
complain of an inability to work when
fed upon it, and soon call for the
flesh of Domestic Animals which by
its longer duration in the stomach keeps
up ~~a~~ more strength and excitement in
the system. V

~~[10. Upon the quantity of fat they con=
=tain. The lean parts of fat animals
is more nourishing than the lean parts
of such as are lean]~~

11 Upon the manner in which they
are killed. The more suddenly life is

thesse

V This remark extends to fish as well as to land animals, and hence fishermen often break ~~pass~~ the heads of fish as soon as they come out of the water, and thus prevent the injuries which their flesh sustains by their ~~struggles~~ convulsive motions when they are thrown upon the ground.

extinguished in them, the less disposed they
are to a rapid solution in the stomach.
To this, general rule there is one exception. Dr Franklin
~~found th~~ has taught us by a number
of experiments that animals killed by
strokes of Electricity are easier of digestion
than animals killed in any other way.
The less blood is drawn from animals
in taking away their lives, the sooner ~~they~~ their flesh
passes out of the stomach. To prevent a
mistake in judging of this fact, it will
be necessary to add that fat animals ~~when~~ which
~~killed~~ become suddenly fat, contain less blood than ~~lean~~ such
as are lean, and of course pour forth
less from their blood vessels when they
are killed.
12 upon ~~their~~ the quantity of fat they
contain. The lean parts of fat animals,

Vo

☿ all animals is more nourishing than the lean, but it is more slowly digested. For this reason pork is preferred by labourers to beef and mutton. It affords most stimulus by its longer confinement in the stomach, and most nourishment from its larger quantity of ~~fuel~~ fat.

11 Fish likewise, from ~~the~~ its rapid tendency to putrefaction, should be eaten as soon as possible after they are taken out of the water.

‡ Animals that are bled plentifully when they are killed, are less disposed to putrefaction, than those that are not. This is the case, with fish as well as land animals. ~~[illegible]~~ The former are rendered more simple and wholsome, ~~[illegible]~~ ~~[illegible]~~ when ~~killed~~ thus bled to death.

~~is~~ more easily digested than the lean parts of such as are destitute of fat. The fat of ~~the fat of~~

13 Upon ~~their being~~ the time in which they are kept after being killed. ~~or longer or shorter times~~ the longer meat is kept before it is eaten, the more readily it digests. To this there are a few exceptions. The pig, the goose & the duck should always be eaten ~~on the day~~ within from twelve to four & twenty hours (according to the state of the weather) after they are killed. The flesh of Animals that ~~are~~ have been kept for several days without food before they are killed, keeps much longer without being tain=-ted, ~~than~~ than the flesh of Animals that are killed with full bellies. ~~Poultry keeps~~ The flesh of poultry keeps longest when their entrails are extracted from them. ~~The flesh~~ It is, by this means, ~~is~~ preserved from a disagree=-able ~~taint~~

√4 By the complete exclusion of the Air. A Sea Captain informed me that he buried a leg of mutton in the middle of a barrel of flour in Philadel-phia, and took it out three weeks afterward in a sound state ~~After a voyage of three weeks to the~~ in Island of Barbadoes.

5 By ~~wrapping it up~~ covering it com-pletely with the powder of Charcoal.

6 ~~The late Dr Chovet while he resided in Jamaica introduced the following method of~~ By sprinking it with salt. meat preserved in this way is said to be corned. The late Dr Chovet while he resided in Jamaica applied the salt in the following manner. He ~~kill~~ ~~The blood~~ ~~the animal by opening~~ drew all the blood out of the body of the animal by opening the Carotid Ar-tery. As soon as ~~the animal~~ it was dead, he poured by means of a pipe a strong solution of salt & water for ~~six~~ two or three days into the blood-vessels through the opening made in the Carotid Artery.

taste
which it derives from the contents of the bowels. We may always know when poultry are upon the eve of putrefaction, and consequently ~~of course~~ most fit for the spit, by ~~the~~ relaxation of the sphincter of the anus, in which case there is an aperture of that extremity of the intestines. ~~There~~

There are several ways of preserving meat in its fresh state in warm weather. These are 1 by placing it in an ice house, or surrounding it with ice in a ~~tub~~ ~~salt~~, ~~or~~ cool cellar.–

2 By suspending it in a deep & cool well.

3 By keeping it in a cool and dry cellar which is ventilated by a chimney.

~~4~~ 7 By infusing it about a foot below the surface of cold ~~water~~ spring water. It will be most safe in the cold water

&V ~~upon its being buried~~ By burying it one or two feet in the earth. –

Of a ~~sp~~ Spring or milk house. ~~meat will keep~~ This mode of
~~a week or~~ preserving meat was discovered
by the late Dr Edwards. It will retain
all its sound and wholesome qualities
for eight, & ~~or~~ ten days in this situation
in the months of July & August. It
contracts a pale color in the water,
but when a knife is thrust into it,
~~b~~ blood follows it as if it had been re=
=cently killed. It should always be ~~dress~~
cooked as ~~fresh as~~ soon as possible after
it is taken out of the water.

19 It is said flesh putrefies sooner when
exposed to the light, even of the moon
than in a dark place. I would rather
suppose the influence of moonlight
upon the animals before they were

killed disposed their flesh to a more speedy putrefaction than ~~[illegible]~~ ~~Other Circumstances~~ by any effect upon it afterwards. What makes this probable is that Crabs & Oysters are larger & fatter during the full ~~of~~ ~~of the~~ moon than at any other time. — Perhaps the ~~fact~~ influence of ~~the~~ moonlight upon flesh has been assumed without sufficient examination, from ~~flesh~~ its exhibi-ting Animalcules sooner ~~in~~ during moon-light than at other times, and that in con-sequence of those animals being allured by the light, to deposit their eggs upon it.

Thunder and lightning certainly hasten the putrefaction of ~~meat~~ flesh, and as there ~~is~~ are no means of obviating its effects, it will be necessary to use it as soon as possible after it has ~~been~~ felt their influence. —

Meat when but little tainted, may be restored by infusing it in Lime water, or wrapping it up in the powder of Charcoal. — The lime water is most certain in producing this effect upon fish.

√ It ~~this~~ ~~[illegible]~~ is by previously pounding raw flesh that the French Cooks prepare ~~this~~ ~~meats~~ it for the pot, ~~and~~ the Spit.

a note from on Digestion

+

I return

13 Upon its being pounded or beaten before it is cooked. Sir John Pringle found that ~~meat~~ flesh when beaten in water, putrefied in half the time that meat does that is left to itself in a quiet state. ~~?~~ ~~?~~ The ~~rapidity with~~ facility with ~~which this ...~~ which meat digests in the stomach is in proportion to the rapidity with which it putrefies out of the body? ~~?~~

14 Upon ~~b~~ its being thoroughly ~~done~~ done. The opinion of half done, or half cooked meat being ~~most easy~~ easiest of digestion, ~~than th~~ has been refuted by a number of experiments made by Dr Stevens of St Croix and published by him in his inaugural dissertation in Edin^r.

15 Upon its being thoroughly masticated. This has likewise been proved by experiment by Dr Stevens+. Where this cannot be done from ~~decayed teeth, or from~~ the want of teeth, the meat should be previously minced or cut into small peices. The connection of sound

~~long as it lies in the stomach it~~
and which after all I believe is never
~~eats~~ able to extract all its nourishing
qualities from it. ~~wild~~ Wild beasts are
said to owe their strength to eating raw
flesh. Perhaps they ~~—~~ eat & digest raw flesh because they
are strong. The same reasonings apply here
that were applied to the cooking of vegetables.

teeth with health, and the means of preserving them shall ~~favor~~ be taken notice of hereafter.

The ~~salubrity of animal food, and the~~ greater or less facility with which animal food is digested and converted into nourishment, is much influ-enced by the manner in which it is prepared.

Raw flesh affords more strength & nourishment to ~~wild~~ beasts of prey, ~~strength to the body~~ than flesh which has undergone ~~when it is prepared for~~ ~~by~~ the action of fire, from the ability of their sto-machs to extract ~~those with~~ all its nutritious qua-lities. ~~this is obvious from~~ ~~the strength of~~ ~~animals that live~~ ~~affords~~ follow from thence ~~that it~~ ~~affords it~~. But it is ~~not so obvious~~ does not ~~follow~~ to the human species, that it ~~affords~~ affords as ~~much~~ nourishment as meat that has been cooked. ~~The~~ The strength it ~~affords~~ imparts to man, is the effect of its greater stimulus ~~from~~ from its slow digestion in the stomach.

I shall in another place distinguish between the ~~indirect~~ direct strength which is imparted to the body by stimulating aliment, and the indirect strength which it receives from aliment after it is converted into blood & nourishment.

a note

+ The Barley broth is made according
to Sir John Sinclair by boiling a teacup
full of Barley for half an hour in a
Gallon of water – then add – three pounds
of lean Beef, or a neck of mutton, with Carrots
or turnips and Onions cut into small
pieces, And a pound of green peas when
they are in season, and let them boil
gently for two hours. ~~with~~ A little Salt must
be added afterwards.

Cockyleeky is made by boiling ~~some leeks~~ an old
~~fowl~~ Cock or fowl, with a piece of beef,
leeks & Dried
& some prunes ~~for~~ some time in ~~water~~
~~[illegible]~~ in the usual quantity of water, and
for the usual time, & afterwards the usual
quantity of salt.

Soup Grasse is made by boiling five
pounds of beef ~~in~~ gently for four hours
in a gallon of water to half a gallon with
onions, Cabbage, Carrots, and as much
Salt as will render it agreeable.

Flesh is prepared for food,
1 by being boiled in Water with certain
Additions of vegetables & condiments, &c
thus made into Soups or Broths. ~~The best~~ many
nations in the world have prepared
~~the~~ flesh prepared for food in ~~this~~
way. The Spartans had their ~~black~~
broth, the Scotch have their barley
broth, and Cockaleeky, and the french
their Soups grasse. ~~& Soups maigres~~ these
excellent liquors should always compose
the first dish of every temperate family.
they not only afford ~~both~~ a great deal of
nourishment, but they serve ~~to~~ by
~~allaying the first~~ damping the appetite to
prevent excess in partaking of subsequent
dishes. they are most salutary and
agreeable when made by placing

+ Grancy vule

the meat with its vegetables & seasoning over a slow fire well covered,
~~with~~ and in water which should be kept
for four hours a few degrees below the
~~point~~ boiling point agreeably to the advice
of Count Rumford. In this way we obtain
the juices of the meat with but little of
its fat. ~~The fat should be made to rise~~
~~to the surface of the water just bef~~ Just
before the pot is taken off the fire the water
should be made to boil for a few minutes, in order to throw
the fatts to its surface. This fat is then skimmed ~~taken~~ +
off; and the broth becomes fit for use.
the meat from which the broth is made
is sometimes so much exhausted of its
nourishment as to be incapable of ~~undergoing~~
putrefaction. — There is another ~~a~~ mode of obtain
~~2 By boiling~~ Roasting. ~~meat thus prepared~~
~~is exact~~ = ing the juices of meat, and

that is cutting a ~~piece~~ pound or more of meat from
which the fat has been seperated, into
small peices and putting them in a bottle
or jug well corked ~~&~~ with a rag tied over the
Cork, and then putting it in to a ~~bot~~ of
water which is gradually heated, and
then boiled for four or five hours.
From a pound of beef or mutton half
a pint of liquor is thus obtained. When
seasoned properly, it makes a pleasant
and very nutritious article of liquid
Aliment.

2 Roasted meat is ~~savoury~~ ~~both~~ soluble in the stomach, & nourish-
-ing from its particles being confined by
the crust being formed over it by means
of the fire. the fibres of the meat are
softened by the action of the fire upon ~~the~~
~~get~~ its juices.

3. Broiled meat is ~~ab [illegible] and [illegible]~~ nearly the same in its qualities as roasted meat. ~~The more intense the heat over which the meat is placed whether on a gridiron or live coals, the~~ What are called stakes are prepared in this way: ~~The~~ By constringing the surface of the meat by means of a quick or intense heat, ~~the~~ its juices ~~of~~ are confined, and the meat becomes more nourishing. The miners in Cornwall prepare their stakes by placing them upon the smooth surface of large blocks of tin in the instant of their passing from a ~~solid~~ fluid to a solid state. The lower part of the meat is ~~the~~ thus so hardened, ~~by the intensity of~~ ~~by the [illegible]~~ that ~~the heat, that~~ all its juices are retained, and the ~~meat~~ taste ~~thereby rendered more tender easy of digestion~~ and nourishing qualities of the meat

✓ 4 By being half boiled & then cut into stakes and broiled. Mutton is ~~much~~ ~~improved in tenderness~~ rendered more tender & savoury when cooked in this way.

5 By boiling. ~~when put to in~~ a considera=ble portion of the nutritious matter of meat is lost by this mode of preparing it for aliment. It is in this state suited to convalescents from fever, & to persons of feverish habits. Mutton is most wholsome when cooked in this way, and so are (contrary to common opinion) Geese and ducks. The water dissipates the oily parts from them, and thus renders them a milder, and more digestible aliment for weak sto=mach. Fish by throwing off a portion of its oil in boiling becomes more easy of digestion than when when cooked ~~than~~

thereby encreased.

✓ 6 By Frying. The butter, oil, lard, or bear grease in which meat is usually fryed is often so much altered in its qualities by the fire as to render the meat prepared in this manner less ~~agreeable and~~ easy of digestion than meat prepared in any of the ways that have been mentioned. —Fish is generally cooked in this way.—

7 By means of Vapor. The meat prepared in this way is placed upon a stand in a pot which is closely covered. This pot is placed over a fire with a small quan=-tity of water in it. The ~~heat of the~~ fire converts this water into Vapor which by its intense heat, renders ~~converts~~ the meat ~~into a pleasant and~~ nourishing, and easy of digestion.

in any other way. We may always know,
when fish ~~has~~ is boiled enough when
it floats upon the surface ~~upon~~ of the
water. It sinks a second time when
it is boiled too much. | I shall mention
hereafter the ~~condiments that are~~ matters
that are mixed with it in order to render
it palatable after it has undergone the
action of fire. +

8. By baking. meat thus prepared retains its juices, but its surface is often so harden-ed by the fire as to be unpleasant to the taste. When baked with other ~~dishes of~~ articles of food it is apt to contract ~~the~~ a taste from each of them.

9 By being made into what are called stews or ~~hashes~~ hashes with ~~cut~~ bread, and certain vegeta-bles. meat is agreeable & nourishing when prepared in this way. mutton half roasted and then made into a hash, Dr Franklin used to say was the most agreeable mode of preparing that kind of flesh for the table.

10 By being baked, or boiled in a paste made of flour & butter in which state they are called meat and pot pies. The meat thus prepared is softned by the fire, and retains with its jui-ces a great deal of nourishment. The

V and slowness of digestion.

paste is rendered more digestible by the
mixture of an equal quantity of potatoes
with the flour.—

11 By being ~~dryed in~~ exposed for several
~~Months~~
months to the Action of Smoke. The Salt
contained in the smoke resists the tendency
of flesh to putrefaction, while its dependant
situation discharges its juices which like-
-wise helps to prevent its putrefying. ~~It~~
- Beef and certain fish are prepared in this way
for Aliment. They stimulate the stomach, ~~contain but~~ ~~little~~
~~nourishing, but they are it~~ but ~~they~~
are hard of digestion, and ~~contain~~ convey but
little nourishment into the body. They
are prepared by labourers from their difficulty of

12 By being exposed to the Action of the
Sun. Stock fish is prepared for food in
this manner.

13 By being infused in ~~being~~ Vinegar.
~~in~~ Shad ~~is Salmon~~ Salmon and Oysters are
prepared for the table in this way.

[illegible] the [illegible] By the
[illegible] to [illegible] [illegible] of [illegible]
[illegible] of [illegible] [illegible]
with the [illegible]

11 By being [illegible] the exposed [illegible] [illegible]
[illegible] [illegible] of [illegible], [illegible]
[illegible] [illegible] [illegible] the [illegible]
of [illegible] to [illegible] [illegible]
[illegible] [illegible] [illegible] [illegible]
[illegible] to [illegible] at [illegible]
[illegible] and [illegible] the [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] of [illegible] [illegible] the [illegible]
[illegible] [illegible] the [illegible]
[illegible] [illegible] to the [illegible] of [illegible]

12 By being exposed to the [illegible]
[illegible] [illegible] is exposed for [illegible]
[illegible]

13 By their [illegible] [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]

they lose a portion of their nutritious matter in the Vinegar, and they pass off slowly from the stomach.

It is often necessary to preserve Animal food for months in order to be used in situations and seasons in which it cannot be procured in a fresh state. The means of during this are

1 By Common salt. This is the most universal preservative of flesh of all kinds. To be effectual, it should be applied in such quan=tities as to penetrate its interior juices, for if a small quantity of the salt be applied, it acts only upon the surface of the meat, and by hardening it, confines its juices, and thus accelerates, instead of retar=ding

v Salted meat ~~and fish are~~ is less nou-
=rishing than fresh.

~~#~~2 By sugar and molasses. ~~This has~~ ~~They~~
~~[illegible]~~ ~~are too expensive to be~~ for ~~common~~
~~use~~. The efficacy of these Articles in
preserving flesh has been proved by
several experiments made by Sir
John Pringle. They are too expensive
for common use.

its
putrefaction. ~~of the~~ the addition of nitre
to the salt improves its antiseptic qualities,
and gives a more agreeable flavor &
Color to the meat. The sooner these salts
are applied, after the ~~death of~~ the Animal is killed
the better. Captain Forrest in his voyages
to several of the Islands in the East Indies advises cutting
out the bones of meat, more especially
of pork before it is salted, for putrefaction
he Observed always began first ~~at~~ near the
bone when it was salted in the Common
way, in Consequence of ~~the~~ its not being
penetrated by the Salt and oozing out a
fresh matter which putrefied, and con-
=taminated the Contiguous flesh. ✓

3 By the heat of the Sun. The Indians
cut their Venison & Buffaloe meats
~~meats~~ into small pieces and hang it up
upon Sticks passed through them in the
Air. The moisture is by this means

dissipated from them, and thus putrefaction prevented. A Sea Captain informed me that he had in this manner preserved the freshness of meat at sea. ~~Until it was~~ He ate it as he wanted it made into Soup. The Stock fish I have said is preserved in this way.

4 By freezing. Flesh is preserved in cold Countries entirely in this way during the winter. It ~~then~~ is thawed by being in-fused in successive Quantities of cold water. When thawed in warm water, it loses a good deal of its savoury ~~par~~ taste.

5 By Smoke. ~~Hams are preserved~~ Beef, hams, and several kinds of fish are preserved after being salted in this way ~~which~~ they are afterwards subjected to the Action of fire before they are eaten. ~~Steam~~ The Smoke which is applied to

Hams is not always sufficient to preserve
them from putrefaction. They have there-
-fore, when taken from the smoke house,
been buried in ~~saw~~ bran, ashes, ~~&~~ or
dry sand for that purpose, but often
without ~~success~~ effect. Greater success
has attended burying them in cut straw,
~~and~~ or tying them up seperately in bags
made of coarse linen, and hanging them
with their small ends downwards in a
cool dry cellar.

6 By being boiled until the meat imparts
all its nourishing qualities to water, and
then reducing ~~this water~~ it to a thick con-
-sistence by boiling it a second time. The
matter thus obtained, has been called
patent soop. It is dissolved in boiling water
~~[illegible]~~ so as to form a
liquid soop, when it is required for use.

√ most agreeable article of aliment,
and well accommodated to ~~the~~ all
seasons ~~the~~ ~~[illegible]~~ milk ~~and~~
ages ~~of~~ ~~the~~ ~~[illegible]~~ and countries. ~~a~~ ~~the~~ ~~hardships~~
& honey ^ were the only articles of diet in
~~of a Camp life were reduced~~ for forty
~~years by the Children of Israel's [illegible]~~
held out to the Children of Israel to
reconcile them to the privations of a
Camp life for forty years in a Wilder=
=ness, and to allure them to the promised
land ~~of Canaan, which was said to~~
~~flow with those delicious aliments~~

There are besides the vegetable & Animal aliments that have been enumerated. ~~several~~ two ~~others~~ substances related to both which ~~which~~ constitute a ~~large~~ large portion of the food of man. These are milk & eggs, ~~tea, coffee and chocolate, upon which~~ of which I shall make a few remarks upon each of them.

Milk ~~abounds in~~ contains but little stimulus, abounds in nourishing matter, and is of easy digestion. It is a V

~~It is composed of three parts, into which it separates spontaneously when left to itself — these are, butter — cheese & whey. The butter is of a vegetable nature, the cheese partakes of the qualities of animal food — the whey is — nothing but water with a portion of saccharine matter~~

V or baked with both into puddings.

V It forms a pleasant desert when
made into what is called Junket by means
of a piece of Rennet, or by adding ~~a little wine~~
two tablespoonsful of a Quart of Wine into which
a whole rennet has been infused, to half a Gallon of
milk.—

an agreeable article of diet of diet prepared from milk
There is ~~a pleasant~~ ~~substitute for butter~~ which is used by
the Germans in Pennsylvania called ~~[illegible]~~ Smear-
-case. It is made by ~~[illegible]~~ placing milk before the
fire until ~~the milk~~ it forms a Coagulum. The whey is strained
from it and to the remaining Curd an equal quantity
of Cream is added. Over this mixture is sprinkled
a little pepper and Salt. It is ~~spread~~ eaten upon bread instead of
butter. ~~[illegible]~~ Milk is least offensive to stomachs disposed
to acidity when taken without being
skimmed. The ~~butter~~ Cream blunts
the acid ~~which~~ whether it preexists in the
stomach or is be formed by the
decomposition of the milk.

It is obtained from many

~~dissolved in it. The Butter is nourishing~~
Animals, but that which in use in our country
~~in the second degree. From the quantity of~~
is obtained only from the cow. This
~~Nourishment contained in butter it sh^d^~~

~~Should be eaten in moderate quantities in~~

Milk ~~taken~~ is usually eaten by itself, or mixed with bread, or with raw _ baked, _ or preserved fruits, or roasted, & potatoes, or mush, or it is boiled with flour or rice;
~~offered~~ ~~In many nations feed upon it chiefly~~

It is sometimes preferred ~~in~~ after it has become sour, ~~undergone its spontaneous decomposition~~
in which state ~~it is acid~~, ~~and~~ is called
Bonne Clabber. In warm weather it is
most agreeable as well as most salutary
when taken in this way as it serves to
obviate the tendency of the system to that
state which predisposes to fevers. Mr Eaton
in his survey of the Turkish empire
speaks in high terms of an ~~acid prepa~~ aliment
prepared from milk rendered pleasantly
acid by means of a ferment, which the

Turks call Yaourt or leban.

~~Butter~~ milk is composed of three parts viz Butter - Cheese and ~~Cheese~~ Whey. They seperate into these parts spontaneously, or they are seperated ~~by~~ into them by means of Art. The butter possesses all the common properties of a vegetable Oil. It is formed from the Cream which rises to the surface of milk after it has stood for some time, by Churning. the more completely the cheesy and watery parts of the milk, are pressed out of the butter, the less disposed it is to become rancid. By repeated wash-ing ~~the~~ in water, this rancidity may be removed, for the parts which putrefy, are soluble in water. It is nourishing, but cannot be taken in large quantity without offending the Stomach. It is said to be

+ "Sunt mihi poma, pressique copia lactis." Virgil

Gold in the morning. Silver at noon, & lead at night from which it may be inferred that it ~~cannot be~~ requires the vigor which the system possesses during the day, to digest it. It is never eaten alone but ~~[illegible]~~ with bread, - or ~~[illegible]~~ with other aliments. When ~~[illegible]~~ dissolved, or when baked, it is more difficult of digestion than taken in its ~~simple~~ solid state.

Cheese is the animal part of milk, and contains more nourishment than Butter. When ~~[illegible]~~ ~~a large~~ the same ~~of it~~ quantity of it may be taken daily as of meat. By age it acquires ~~as~~ a pungent taste which renders it more proper for what ~~I shall~~ ~~are~~ is called a Condiment, ~~and~~ of which I shall treat ~~presently~~. in the next chapter. It is eaten only with bread, or with certain raw fruits. The Romans ate it with apples. -

The Whey of milk contains a small portion of Sacharine matter dissolved in water. It is a pleasant aliment for in=valids and Convalescents from acute diseases, taken by itself or eaten with bread. —

~~So~~ much of the ~~wh~~ healthy and useful qualities of Milk, and of its products depend upon the ~~ag~~ ~~the~~ aliment ~~food~~, and the treatment of the Cow. ~~Sh~~ The former should be succulent, and nourishing. She should ~~be alw~~ have room to exercise her=self in walking, and where this is not practicable, she should be rubbed down (to use the hostler's phrase) every ~~in the~~ morning and evening. The milk is not only increased by these means in ~~its~~ quantity, but much improved in its qualities.

[✓ and by the ~~in~~ increase of the cavity
in which the air is contained:] They are
⊕ eaten raw, or beaten up ~~by~~ in Water,
Wine, Spirit, and hyson tea. ~~in all~~
~~which mixtures they afford a good~~
~~deal of nourishment~~. They form
an excellent substitute for ~~cream~~
when beaten up with any of the India ~~China~~
teas. They afford most nourishment
~~when to~~ taken in this way; but they
are less digestible, than when they have
~~not been~~ partaken of the action of
fire by boiling, or poaching,

Eggs constitute a considerable part of the food of the inhabitants of many countries.

They are, like milk, of a compound nature ~~of the ve-getable & animal matter~~ The white of ~~the egg is of the belongs to the~~ it possesses vegetable; and the yolk animal qualities. ~~they are less~~ hence the latter putrefies and of ~~sooner coarse digests~~ is digested sooner under equal circumstances than the for-mer; ~~for~~ on which account it is sometimes prescribed ~~without its white~~ alone for weak stomachs.

We may always know when an egg is sound ~~by~~ from its larger ~~[illegible]~~ end imparting a sensation of ~~a sense of warmth~~ a moderate heat to the tongue; ~~they are either be prepared for food in their simple state by boiling, also~~ or by being mixed with milk - into custards or with flour or rice ~~&c the like~~ into puddings. They ~~are most easily digested~~ should be cooked in a heat below the boiling point ~~and~~. ~~They when they are not in a liquid state~~ ~~are best may be prepared~~ preserved during long ~~voyages by being covered with tallow or~~

~~Bees Wax first melted, and applied over them~~
~~by means of a feather~~. For this purpose
~~they~~ the vessel of water in which they are to be placed ~~mentioned~~
after previously boiling, may stand upon a ~~upon~~
table or at a distance from the fire. They
should be taken out of the water as soon
as the heat pervades every part of ~~it~~ them in which
state, the whole egg is alike soft and easy of
digestion. Eggs may be preserved during
long sea voyages by being covered with tallow
or bees wax first melted, and applied over
them by means of a feather.

Of Condiments.

The same bountiful Creator who added the pleasures of music to the common & necessary uses of the ear, and of Colors to the common & necessary uses of the eye, hath ~~added~~ ~~encreased the pleasures of taste by~~ furnished us with certain substances to be ~~mixed~~ with, or added to our aliments, which are intended to promote health by encreasing the pleasures of taste.

They have been divided into saline, ~~fœtid, &c~~ sweet – oily, mildy, alliaceous gelatinous – aromatic ~~fœtid and narcotic~~. and acid. –

They act in the ~~four~~ following ways. 1 They stimulate the tongue agreeably, and thus add to the pleasure of eating.

2 They stimulate the salivary glands & thus increase the quantity of saliva, & ~~thus~~ assist digestion.

3 They stimulate the stomach, and

V 7 It is possible some of them may by combining with Aliment cause them to evolve a greater quantity of nourish-ing that is ~~usually~~ extracted from it by the common powers of diges-tion.

We reason ~~for~~ incorrectly when we suppose

~~that~~ / This depends upon the greater

dissolving power of the ~~juices of~~ the animal

juices of the stomach ~~w~~ which enables them to

extract ~~the~~ the whole of the ~~alim~~ matter

from the less activity of

from the meat. It does not afford

the gastric Juice in the human Stomach

No 25

Perhaps we mis take the effect for ye cause in carni animals. It may be ~~they~~ it may be their strength enab them to live & not the flesh strength.

thus increase the secretion of gastric juice, ~~and~~ & thereby facilitate digestion. they likewise increase the activity of the stomach, and enable it more easily to throw the aliment when digested, thro the pylorus into the bowels. —

4 They produce ~~[illegible]~~ a excitement and strength through the whole system, from its sympathy with the sense of taste & the stomach,

5 Some of them ~~they~~ retard digestion, and in so doing ~~this is by~~ they perpetuate the influence of aliment in the stomach in imparting vigor to the whole system. They likewise prevent in this way the frequent recurrence of hunger at times & in situations in which it is not convenient or practi=cable to gratify it. —

6 Some of them ~~and~~ convey nourishment into the body. V

√ We read of its being ~~its~~ being sprinkled upon
those ~~that~~ parts of the sacrifices which were eaten by
the priests under the levitical law in order to
render them palatable & wholesome. It is so
essential in diet in some countries, that it
is common to denote the whole of a man's
subsistence by the word salt alone, as we do
by the word bread. ~~Alone~~. Thus in some
parts of India a man who is supported by
the business of a friend is said "to owe his
salt to him". the same expression is used in
Holland in speaking of a ~~speaking~~ of a depen=
=dant who is fed by the hand of charity. Even
among the Romans it was considered so im=
=portant a part of diet, that when a man
received an office from the Government he
was supposed to receive the means of purcha=
=sing his salt — hence the origin of the word
salary, from ~~the word~~ sal, ~~or~~ which signifies
salt. These facts are mentioned to show that
the use of salt is nearly as universal as bread,
and almost as necessary for the subsistence of man.

The saline Condiments are chiefly com:
=mon Salt and Acids.

The use of common salt with ani=
=mal ~~and~~ food, and with certain vegeta=
=bles is ancient and Universal. ~~In a small~~
~~quantity~~ It promotes ~~increases the digestion~~ the
dissolution of fresh meat ~~the food~~ in the Stomach,
~~and in as~~ but ~~when it p~~ it retards the
digestion of salted meat. ~~that has been preserved~~
~~by it~~. It is for this reason that the latter ~~it~~ is
preferred by Sailors, Soldiers & labourers.
By its durable stimulus in the stomach,
it imparts strength to the whole system.
When used in excess, ~~or~~ without vegeta=
=bles it brings on ~~ma~~ several diseases
particularly the Scurvy. It is used not
only in its simple state, but combined

V and with ~~certain the flesh of~~ the flesh in the form of ham - and what is called neats ~~t~~ i.e. that is ~~[illegible]~~ beef's tongue.

macrel, shad-
with of certain fish, as ~~herring~~- sprat [illegible]
oyster ~~[illegible]~~ and Anchovy in which state it encreases
the appetite, ~~for and~~ as well as helps the
digestion. It should be taken in larger
quantities with fish, than with the
flesh of land Animals, upon the account
of ~~the~~ its more rapid tendency to putrefac=
=tion in the stomach.

Of the Acids vinegar is used chiefly as ~~[illegible]~~ a condiment ~~[illegible]~~
~~vinegar, lime and lemon juice - tamarin=~~
~~=ds and substances~~ in the United States,
with all ~~those~~ vegetables impregnated
with, and preserved by it which are known
by the name of pickles. Much has been
said against them ~~[illegible]~~
~~[illegible]~~ in treatises upon the means
of preserving health. When substituted
for aliment, they are certainly hurtful,

V and other Acids more copiously as a Condiment than any Nation in Europe.

V Acid Condiments are useful in lessening the Viscidity of fish, and of young animals. They likewise obviate flatulency, and hence their Utility in Salads of all kinds.

and particularly in bringing ~~on~~ diseases of the Stomach, but ~~when~~ used sparingly, ~~and so~~ so as barely to ~~impress~~ be tasted in our food, they are, ~~useful in~~ if not useful certainly inoffensive. Besides Vinegar, the juice of Lemons, Limes, Tamarinds and the Toma=tas are sometimes employed as acid ~~and~~ Condiments. In Germany & France ~~they use~~ the juice of the grape before it is ripe, a little fermented, is used in=stead of the juice of those ~~we~~ troppical fruits. It is not ~~acid~~ only acid, but gently astringent, and very grateful to the taste. ^ The Germans use ~~vinegar &~~ Sugar - honey - Molasses ~~and various kinds~~ ~~we pleasant ... Condiments~~, ~~and~~ add to the nourishing qualities of aliments as well as improve their taste. When

taken in a large Quantity, they retard digestion, and finally impair the health of the Stomach. The celebrated Mr Richard Baxter has left it upon record that his constitution was ruined when a boy by his mother feeding him upon sweet meats, or aliments overcharged with Sugar. When taken fasting, ~~they~~ it has been found to prevent and destroy worms in children.

The oily Condiments include the ~~Sweet~~ Oil, of Olives & almonds - Butter, - Cream - ~~lard, and~~ and the fat of sundry animals as the hog, the sheep, the goose and several kinds of fish. They all facilitate the deglutition of the aliment with which they are mixed - they retard digestion, and hence the Utility of one of them, that is butter with fish, and they are very nourishing. Dr Stark found by his experiments ~~upon the ole influence~~ that the fat of those animals which are used in diet afforded

v They are all nourishing in a great degree, and when taken in large quantity they retard digestion, and weaken the stomach. -

three times as much nourishment as ~~their~~ the lean parts of their flesh. Pork is more nourishing than beef, only from its containing more fat.

The Condiments which are composed of the different preparations of milk are sweet ~~cream~~, sour cream, - inspissated milk, that is the ~~[illegible]~~ oily and cheesy parts of milk de-prived of its whey - the curds of milk - melted butter - and all the different kinds of Cheeses. ~~that~~ Of the ~~best~~ Cheeses, the Shapsago and old ~~the~~ English Cheese are the most stimulating. They should therefore be taken in but small quantities. They are all apt to ~~create~~ induce Costiveness, and should be taken sparingly by persons who are subject to that state of the bowels.

38/2

There are certain substances of a gelatinous nature which are employed as condiments. These are chiefly the shavings of hartshorn the Ichthyocolla - Starch - ~~an~~ the whites of & yolk of ~~an~~ eggs, and the jelly obtained from calves feet and other animal substan=ces. They serve to improve the taste of several articles of diet by purifying them, and mixed with aliments of all kinds, they are lubricating to the ~~throat~~ mouth and throat - and afford a ~~small~~ moderate degree of nourishment.

✓ The Alliaceous Condiments are Onions, Leeks, Garlic ~~and~~ Chalots, ^and Assafoetida. they are used ^both raw ~~in this~~ and after undergoing the action of the fire. ~~They are~~ A relish for them is the effect of habit, and hence like ~~all the artificial arti-~~ ^other things ~~ficiale articles~~ of not originally agreeable to the senses of taste and smell, they ~~become~~ take a stronger hold of the appetite than such articles as are originally agreeable. They are ~~grati~~ gently stimulating, for which reason they have been resorted to, to oppose the ^debilitating effects of heat and labor in ^all ages & in all countries. [Sir William Temple says the pyramids of Egypt were built by them; that is the ~~toils of the those~~ ^men who were employed in ~~that~~ that stupendous monuments of human industry were ~~supported by their being fed by~~ ^enabled to sustain their toils by the strength they derived from those active

~~Condiments. The Jews while ~~prisoners~~ they lived in Egypt~~
~~~~in bondage then~~ were enabled to ~~bear the these~~~~
~~perform the severe exertions of their task~~
~~masters in a hot sun by feeding upon the~~
~~same Articles.~~ ~~It~~ is to be lamented that
~~they~~ [they are likewise moderately nou=
=rishing, and they retard the digestion of all
the aliments that are taken with them. ~~Asafoetida~~
~~belongs to this Class of Condiments.~~

~~Related to these Alliaceous Condiments~~

~~is~~ The Gum Asafoetida ~~contains~~ Acts chiefly
by its stimulating power upon the ~~St~~ Sys=
=tem. It is ~~used most chiefly by the~~ sometimes
~~used to with Beefs~~ rubbed upon the grid=
=iron, or upon the dish in which beef
Stakes are placed. It is likewise used with
some kinds of fish. Mr Grose ~~in his~~ speaks
of a nation of India who abstain wholly from
animal food, and fermented & spirituous liquors,
that mix this Condiment with all their
~~~~

Aliment. their breath & perspiration he says smell of it.

It is somewhat remarkable that whole nations have been distinguished by their attachment to some one of the Condiments that have been mentioned. The Germans prefer vinegar, - the French Sugar, - the English butter, and the Spaniards Onions, above all other Condiments in their aliment. The Americans more wisely make use of ~~[illegible]~~ them all.

The aromatic ~~[illegible]~~ Condiments are very numerous. They are parsley - sage, thyme, sweet marjoram - Dill - Aniseed & fennel seed, tansy - nasturtium - Saffron - cloves - mace, Cinnamon ~~[illegible]~~ Nutmegs, and ~~[illegible]~~ some others. The Germans use a great quantity of the Aromatic herbs with their aliments. The kitchen of Frederick the 2nd of Prussia was ~~[illegible]~~ so filled with bottles ~~[illegible]~~ containing them, that it resembled

✓ They are particularly useful when mixed with what are called the cold fruits. They retard the ~~rapid~~ progress of fish, and the musk melon to a rapid putrefaction

Recipe for Curry –

an apothecary's shop. they improve the
~~flavor~~ taste of aliment, increase the
discharge of saliva, and help digestion by their
stimulus upon the stomach. useful in
West Indies - why?
The Acrid Condiments are chiefly allspice —
black and Cayenne pepper — Capsicums Cu=
=bebs — Cardamon ~~seeds~~ & Coriander seeds — Ginger
mustard and horseradish. they are used
~~chiefly~~ with food that is ~~dif~~ hard of diges=
=tion ~~both~~ of a vegetable & animal na=
=ture. they stimulate the tongue, mouth, throat ~~fauces~~ &c
stomach, and through ~~their~~ means act
powerfully in giving tone to the whole
System.
All these Condiments are generally ~~sometimes~~
taken simply, but they are sometimes mixed.
~~as in Sausages — Sauce and most of~~ thus Acids
and sugar are united in certain preserves,
Butter and sugar in certain Sauces, and

Salted meat - fat - pepper - and certain other Spices in Sausages. ——

~~Ice~~ To the Condiments that have been menti-oned it remains only to add one which ~~do~~ does not belong to any of the former heads, and that is Ice. It is used to ~~cool glasses~~ cool cer-~~the~~ tain drinks and aliments and ~~to~~ thus to improve their taste in warm weather. It is likewise used in substance mixed with Creams. In ~~It~~ this way it is ~~cooler~~ grateful to the tongue, - cooling in the mouth, - and sedative ~~through~~ through the medium of the stomach to the whole body. Ice Creams are ~~unsafe upon an empty~~ generally taken with, or ~~stomach~~ after other Articles of Diet in ~~which~~ the latter case they are inoffensive, if ~~taken~~ eaten in a mode-rate quantity, but ~~when taken~~ upon an empty stomach, they are apt to create ~~spasms~~ colics, Dysentery, and ~~often~~ to become the exciting cause of fevers. ——

There are certain Condiments which are used to improve the taste & stimu=-lating qualities of the liquors we take with our food. These shall be taken notice of hereafter.

~~Answers~~ There are ~~three~~ two articles ~~of~~ which compose a part of the diet of the inhabitants of the United States, which though not ~~entitled to the~~ possessed of any nourishing qualities, yet from the matters that are mixed, ~~and~~ or taken with them, are entitled to a place in this history of aliments. They are Tea and Coffee.

A Revolution has taken place in the ~~man=~~ ~~=ners and~~ diseases of Europe & America since the introduction of these Articles into general use. ~~They have~~ Upon the Consump=-tion of

~~Unnatural food and Ardent Spirits, but~~ ~~they have~~ ~~not~~ they have ~~changed~~ transferred in many instances, the diseases of the bloodvessels into the nerves. From the general use of tea, the Hysterical disease which was once confined to high life is now often seen in the kitchen, and in the huts of poor people. But let us state the facts fairly that relate to this subject. ~~The~~ most of the diseases which have been ascribed to tea and Coffee might perhaps be ascribed to their being taken too strong or too often, or by themselves, without ~~and~~ a due mixture of sugar & cream or milk, or bread and butter with them, whereby they are left to ~~pass~~ act with ~~not~~ an undiluted force upon the nerves of

~~There are many articles of~~ ~~other kin-~~

the body. ~~There are many~~ ~~without~~

~~-nourish diet which if taken without~~

~~the~~ Meat - cheese and butter if taken ~~by themselves~~ in excessive quantities or without bread, and many other articles of diet if taken without their ~~usual~~ customary mixtures, would be equally hurtful to the stomach and the whole system with tea and Coffee taken in excess or by themselves. In their favor, let us recollect ~~that~~ how much they have lessened the consumption of ~~the~~ animal food and ardent spirits, and how ~~how~~ to the stock of innocently added ~~greatly to the pleasures~~ of social ~~life~~ and convivial pleasures. ~~A Glutton~~ ~~and a sot seldom sit down at a~~ fondness for tea and Coffee and an undue attachment to the knife and fork, and the bottle

are rarely to be met with in the same person. From their gentle & grateful stimulus they are peculiarly agreeable & useful in the following states of the system.

~~from~~ 1 After great fatigue of body ~~and~~ or mind. From ~~its~~ the influence of Coffee upon the latter, it ~~has been~~ is called by the french "Boisson intellectuel;" or intellectual drink.

2 After a full or oppressive meal. Coffee is usual resorted to by the french to relieve this oppression.

3 After intemperance in drinking.

4 After taking Opium. ~~It~~ Coffee is used with the ~~best~~ most success to remove~~s~~ the sickness and languor which sometimes follow the exhibition of that medicine.

5 In a depressed state of the mind from any cause.

6 In cases where wakefulness is required

either for study, or attendance upon sick people. They should be made a little stronger than usual for this purpose.

¶ In cases where it is necessary to resist moderate degrees of heat or cold. Tea revives both the body & mind when depressed by the heat of a long sum=mer day, and Coffee fortifies the body against the ordinary cold of winter. I knew a ~~Country~~ physician who ~~derived great advan~~ ~~made it a practice~~ lessened his sufferings ~~to drink a~~ from cold by drinking a pint of strong Coffee when he was obliged to expose himself by a long ride in the Country in ~~cold weather~~ ~~the~~ ~~winter months~~ cold weather.

The black teas, as they are called, particularly the Souchong are the

44.1

~~for~~ best for ~~daily use~~ breakfast. The more cordial teas are best ~~boiled~~ calculated to restore the body and mind after the business of the day is over.

That Coffee is best which has been well dried by age, and moderately roasted. The Arabians and the Turks prefer it bruised, instead of being ground, before they boil it. It is most cordial when taken without sugar. The Turks use it only in this way. —

44.2

In treating of the
~~The~~ Salubrity, of Aliment ~~and drinks~~ ~~we~~
~~depends very~~ we must not pass over ~~the~~ in
silence the nature and Condition of the Vessels
in which they are preserved, and prepared for
use. They are preserved in a sound state in
wooden Vessels provided pains are taken to keep
them clean, by washing and exposure to the
Air. The vessels employed in Cooking, or
in subjecting food to the action of fire are
made of earth, and metals. Of the former, ~~the common~~
~~earthen Ware is not liable to be acted upon~~
~~by Acids nor oils.~~ — Glass, and China are ~~both~~
sometimes employed, but they ~~inoffensive to food~~ are too brittle and expensive
for this purpose. The Common earthen
Ware of our Country when properly made ~~in~~
should be preferred to them. ~~This is not~~ The
preparation of lead which is mixed with it,
is not liable to be acted upon by Acid, nor
fat Substances. Of the metals, Silver, tin Copper, ~~Silver~~

√ it a portion of the Copper, or by ex-
-posing the Copper to the action of the
substances which dissolve it, ~~produces~~ renders
the persons who use it liable to ~~tumors~~ Diseases
of the Stomach bowels and Nerves. ~~When~~
The hurtful effects of both tin and ~~compelled by necessity to~~
~~those who~~
Copper vessels are much lessened by not ~~using~~
~~using the~~ permitting aliments to remain
in them after they are taken off the
fire, and ~~exposing to~~ exposed to the Air. The in-
-fluence of the Air in aiding Oils & acids to
act upon Copper is evident from those
parts of them ~~or~~ being most affected by ~~the~~ it,
~~Copper~~ which come into Contact at once
with the Air & the Copper. Simple water is
Vessels of Iron should be preferred to all other metals
for the purpose of Cooking. The parts of them which
are dissolved ~~by acids~~ or Abraded by the matters
~~which~~ that are put into them, are inoffensive, &
sometimes useful to the body. To obviate =

in preparing food for the table
~~Tin & stone~~ & Iron are sometimes employed ^were ~~the~~
silver ~~is too~~ ^less costly ~~for~~ it should not be
~~employed~~ used for this purpose, for ~~with~~ the
the alloy ~~which~~ of Copper which is mixed
with it, ~~this~~ ~~is soluble~~ ^by dissolving in acids and oils, ~~and~~ ~~has~~
~~is~~ renders it an unsafe implement of cookery.

~~Copper is usually employed with a thin covering of tin over it for culinary purposes, but the tin soon wears away, and by mixing with the food produces ~~to~~ diseases of the ~~bowels~~ stomach, ~~bowels~~ & nerves.~~

Tin when pure, is insoluble in ~~oils~~ acids & oils,
but as it is ~~generally~~ ^sometimes mixed with more or
less ~~arsenic~~ lead, Copper, or Arsenic all of which
are acted upon by both those substances, it
should not be employed as a culinary vessel.
~~It~~ is least hurtful, or unsafe ~~when~~ used as a ~~tea~~ kettle.
Copper is usually employed with a thin
covering of tin over it for culinary purposes,
but the tin, ~~when~~ admitting it to be pure,
soon wears away, and by ~~mixing~~ carrying with

✓

= the taste, or dark color which Iron

~~imparts~~ imparts to certain articles, the inside

of them is sometimes lined with Zinc.

~~which~~

It remains now to mention the liquors we take with our solid Aliment. The relish for them, is an instinct of nature. They serve many valuable pur-poses in the body. ~~such as diluting~~ They dilute to a certain and necessary Degree, the saliva and gastric juice, ~~& obviating and washing Acrimony out of the body. and~~ and thus ~~aiding~~ aid them in dissolving the food. They ~~likewise~~ obtund acrimony, ~~in the first passages,~~ ~~and~~ or wash it out of the body through ~~the passages opened for it in the~~ kidneys or the pores of the skin, and such ~~of them~~ of ~~body~~ ~~many of them~~ as are of a ~~strong~~ nourish-ing nature, ~~and~~ assist in the support of health and life.

45-2

~~Those~~ the liquids we take with our food are Water - ~~Beer wine cider and~~ fermented liquors and Ardent Spirits.

Water ~~has been divided into Spring - pumps, and river or flowing Water~~ - from all its sources when alike ~~pure~~ pure, possess the same qualities. It may be known to be pure from the facility with which it dissolves soap, and boils vegetables - from its having no smell, and no peculiar taste, - from the difficulty with which it freezes, - from its being soon hot and soon cold, - from the healthiness ~~state~~ of the Animals that drink it, - and ~~it~~ from the number of fish that swim in it, and from the verdure, ~~&~~ fertility of the shores that are washed by it. It is necessary ~~to~~ its ~~pu~~ being perfectly agree-able that it should contain ~~a~~ $\frac{1}{28}$ part of

Atmospheric Air and a Cubic inch of Carbonic gas in a 100 parts of the water. Boiling it deprives it of these Airs, and ren=ders it less pleasant to the taste. It is from the want or deficiency of these Airs, that Snow water is so insipid, though it possesses otherwise all the properties of pure water. Rain water is most pure in the Winter & Spring from the Air in those seasons being most free of exhalations and other foreign ~~[illegible]~~ ~~of [illegible]~~ matters.

What are called hard waters are made so by the solution of certain Salts, earths and metals in them. This is not the place to mention the means of detecting the presence of those matters, but it will not be foreign to the design of this work to remark that many ~~much~~ more evils have been ascribed to them ~~Waters~~

than are just. Where ~~they are~~ the Water is not offen=
=sive to the taste ~~xxxx~~ from any of its
mixtures, nor impregnated with putrid
matters such as the oozings from privies
and certain manufactures in large cities,
~~they~~ it seldom does any harm. It is certain
the gravel and stone are ~~seldom~~ not oftener met with
in Countries in which waters are drunken
that abound with Calcarious earth than
in Countries in which this is not the
case. ~~I ...~~ ~~Happily for us habit~~
~~discourse~~ Should the saline- earthy or metallic substances that have
been mentioned which are contained in hard water, be originally offensive to
the system happily for us, the habit of using
it ~~for~~ after a while, deprives ~~them~~ it of
~~thes~~ its hurtful Qualities.

Water taken very cold, in a large
draught when the body is heated by labor

~~[illegible]~~ produces many sudden deaths
every year in the United States, and where
this is not the case, it ~~has~~ often induces acute
and chronic diseases. To prevent these fatal
and distressing consequences from ~~the~~ drink-
-ing water ~~in the~~ under the circumstances
~~that~~ have been mentioned, let no cold water
be drunken while the body is preter-
-naturally heated, but if the intensity of
thirst forbids the delay that is necessary
for this purpose, let the vessel (provided
it be made of ~~a~~ metallic or of ~~an~~ earthy
matters) be grasped closely with both
~~the~~ hands for two or three minutes.
~~A portion of the heat~~ this practice
will act in two ways. It will carry
off a portion of the heat of the body,

and it will convey it into the water, and thus ~~before~~ removes ~~the~~ or lessen the danger of drinking it. If this direction should ~~keep~~ impose too long a restraint upon the thirst, let the hands and face, or feet, or all of them be washed with the cold water before it is tasted. A large portion of the heat of the body will thus be carried ~~out of it~~ off, and ~~one~~ the ~~of the~~ principal causes of the ~~f~~ bad effects of the cold water by that means be ~~prevented~~ obviated. It is because horses when heated by ~~labour~~ travelling wett ~~in~~ their feet in the streams of water ~~before they drink the~~ ~~water~~ into which they pass before they drink, that they are never injured by it. ~~and~~ ~~it is from the~~ Pump water is equally inoffensive, ~~to~~ when drank by horses from the practice

of previously throwing buckets full of it over their bodies when over heated by labor, & cooled with Sweat. ~~before they are permitted to taste it.~~

It is a common mistake to suppose that ~~cold~~ water in order to allay thirst, ~~in warm~~ and cool the body in warm weather should be very cold. ~~It often~~ So far from having those effects, it often encreases both heat and thirst. ~~The~~ Labor intelligent house Carpenter in Philada first found ~~has discovered,~~ ~~by long~~ out and ~~the~~ experience ~~of many~~ ~~confirmed his discovery~~ ~~few laborers~~ ~~has proved that Labor~~ is ~~best~~ most easily sustained in the hottest weather by drinking water that has stood for some time in the sun so as ~~to~~ acquire nearly the temperature of the air. ~~It~~ ~~It allays~~ By allaying thirst when ~~it~~ taken in

this way, ~~[illegible] [illegible]~~ it saves much of the time ~~which~~ is often lost in walking or sending to a distant spring or pumps for fresh supplies of cold water.

It is a common practice with some people to take a draught of cold water just before they go to bed, or as soon as they get up in the morning. This practice probably originated in intemperance, & has ~~spread by imitation~~ been innocently adopted from ~~as~~ a ~~be~~ belief ~~in being~~ that it conduces ~~of its conducing~~ to preserve health. The reverse of this is true. ~~It tends to debilitate the body~~ It may be practised for years without producing ~~these~~ any bad effects, ~~stomach, and to lessen the appetite in the morning,~~ but finally it has been found to ~~& to induce spas~~ debilitate the stomach, and to impair the appetite and digestion. ~~or to~~ ~~It may be practised~~

V water constituted the only Drink of the Roman Armies while traversing the hottest Countries; and by this & a cause to be mentioned hereafter they were preserved from all those diseases which afflict or destroy so great a proportion of the Armies of modern nations.

~~for years~~
~~without speed i[illegible] without producing~~
~~these effects for years, but few people[illegible]~~
~~really the stomach seldom fails~~

~~Water is nutritious~~

Certain ~~nutritious~~ matters are sometimes added to water such as milk — vinegar, molasses — and syrups of different kinds, and fixed air in ~~in order to render~~ what is called artificial Seltzer water. ~~it more exhilarating as a drink. They~~ They render it more pleasant, and add to those qualities in it which enable it to support animal life. Vinegar & V

Simple as water appears to be, it contains some nourishment. This is inferred from life continuing much longer in Animals that have access to water, ~~than~~ without food, than in those that are deprived of both of them. —

~~In~~ Poets as well as physicians have lavished their praises upon this beverage

V But loud and universal as the praises of Water have been, it is not always the most proper drink with our meals. From its promoting the digestion of food more rapidly than any other liquor,+ it disposes to the frequent returns of appetite, and from its possessing no stimulus, it prompts to take a ~~greater~~ quantity of food, than the system requires, to supply its place ~~[illegible]~~ ~~reasons, and from the insipidity~~ of ~~our~~ water ~~to the taste, othe~~ It is from these effects of Water that persons who drink it alone with their meals, ~~are~~ ∴ have sometimes been remarked to be great ~~eaters~~ feeders.‡ From these reasons, and from the insipidity of water to the taste, other liquors have been resorted ~~to~~ as more salutary and agreeable.

+ ~~This has~~ note been proved by many experiments:

of nature. It was the first drink of
man, and it is prefered in infancy &
Childhood ~~[illegible]~~ to all Other liquors. It is
prefered likewise in all those states of the
body in which violence has been done ~~nature suffers~~ ~~violence~~
to nature, as in ~~fevers~~ extreme thirst, +
from labor, or ~~and~~ a fever, and after
intoxication. ~~That there are habits~~ ~~the aliment~~
~~that still~~ ~~for the habits of civilized~~
~~life have rendered other liquors more agree-~~
~~=able~~ ~~to~~ ~~and~~ ~~in many~~ ~~some of them~~ ~~instances~~ ~~more~~
~~salutary.~~ ~~to man~~. These liquors
are

+ a note

Dr Beattie mentions in one of his letters
that he once dined with Dr Johnson at Sir
Joshua Reynolds, and that he ate more meat
~~at~~ than he could eat in ten meals. Dr Johnson
drank nothing but water.

fermented and distilled. The former
include beer - Cyder - perry - and all the
different kinds of Wine. The latter con=
=sist of ~~[illegible]~~ Ardent Spirits. I shall
make a few remarks upon each of
them.

All the grains called Cerealia afford
by ~~malt~~ brewing - ~~or~~ malting - & brewing
a fermented liquor known by the
name of Beer, but the grain ~~is~~
most commonly used for this purpose
is Barley. The Beer made from it con=
=tains a large quantity of saccharine
matter and affords a good deal of nou=
=rishment. It is upon this account,
meat and drink to the poor people in
some Countries. It is an excellent ~~[illegible]~~

~~as~~ Drink for labourers, but too nourish-
-ing for persons who lead indolent and
sedentary lives. ~~That kind of malt~~
~~liquor which is called~~ Ale and Porter have
several Advantages over the common
table beer in being more cordial, ~~in~~ &
stomachic, and in retaining their
wholsome Qualities in warm weather.
They may be drank diluted with
water during the summer months. ~~in~~
one part of either of them may be mixed
~~or they may~~ ~~be exposed with from~~
~~three to~~ 4 parts of ~~porter diluted with two mixed it~~
with 8 of water ~~and~~ half a pint of honey
or Molasses or half a pound of Sugar and
a little ginger, and put into bottles where it
undergoes a fermentation & is fit for use in
24 hours.

Cyder contains a good deal of Saccha=
=rine matter blended with a pleasant
Acid, and diluted with water. It is
gently stimulating & nourishing, ~~but~~
when mixed with water it makes
a pleasant Summer Drink. It has
been said to be hurtful to persons
predisposed to Gout & Rheumatism.
This probably depends upon its acid,
~~which~~ for upon extinguishing a red
hot iron in it which obtunds this
Acid, it is said not to ~~have the best~~ excite those
~~ing~~ diseases, but to prevent them.
Two barrels of Cyder fresh from the press,
boiled into One
and kept in a Cool Cellar for
2 or three years make a pleasant

liquor which has obtained the name
of Pomona Wine. It may be drank
by itself, or diluted with water.

The Wine which is obtained from the grape
has as many names as it has qualities &
its kinds native countries. ~~as~~ ~~they~~ All contain
more or less saccharine matter - an
acid - a spirit - an unfermented matter
called must, diluted with ~~and~~ water. They are ~~have~~
~~been divided into~~ Strong - ~~Sweet - and~~
~~and Acid. To the first~~ such as Sherry belong Madeira,
Sicilly - ~~Tea~~ Fayal - Teneriffe & Lisbon.
~~into~~ Sweet such as ~~To the second belong~~ Tokay - tent - Frontiniac,
and Malaga, - ~~into~~ Acerb such as
Port - Claret, & Burgundy - ~~and~~ in Acid such
as Moselle - Rhenish and hock. They

V qualities according to their age. ~~they~~
~~should never~~ The older they are, the
less easily are they decomposed by
the stomach. The strong wines are
in their most perfect state, when they
are between six and seven years old,
~~they~~ at which ~~the~~ time they should
be kept in bottles. ~~not more than~~
~~H They should be taken sparingly in the intervals~~
~~two or three glasses of them~~ Intoxicate most
~~[illegible]~~
when swallowed <u>slowly</u> ‡

are stimulating ~~or~~ and nourishing accor-
-ding to the greater or less quantity of
saccharine matter - ~~and~~ and most of spirit
they contain. They possess very different

These ~~strong~~ wines are ~~most suited to~~ less impaired by
the climate of the United States than any
others. ~~Wines~~. They may be taken with
water, or by themselves. The sweet wines
are nourishing, and make with a bis-
-cuit or crust of bread a pleasant supper.
not more than two or three glasses of them should be taken with a meal upon ordinary occasions in an undiluted state, but a less quantity ~~will be~~ should be preferred.
The acerb and acid wines are most agree-
-able when taken with sugar ~~[illegible]~~ &
water. They are improper in all gouty
and Rheumatic constitutions. ~~#~~

There are certain imitations of the
product of the vine which are used as
substitutes for them. These are

for No 49 = ~~of the~~

I know a contrary opinion of the has been entertained of condiments and fermented liquors. Food has been supposed to be wholsome in proportion as it is simple, or prepared without seasoning and be eaten without Beer or Wine. But this opinion is contradicted by ~~the analogy of the works of creation &~~ the experience ~~of all~~ of mankind ~~. The a single ... from the feath... food is so repug=nant. The Instead the they were single to the ... general ... of the creators Designs.~~

The tongue is an important ~~...~~ cord in ~~...~~ the instrument upon which the stimuli act ~~which~~ that support animal life. ~~in~~ extend their influence thro' ~~the~~ they ~~act in to the upon~~ this organ to every part of the body. This is demon'd by a single experim.t. ~~lose~~ One ~~...~~ two ~~quarter~~ of quart ~~...~~ Wine ~~...~~ when sipped, and thus permitted to lie for sometime upon the tongue will produce ebriety. ~~...~~ that is necess'y to ~~do so have~~ produce that effect when taken into the stomach. ~~but~~ this stimulus upon the tongue is a pleasurable one, now pleasure when moderate is friendly to ~~life and~~ health & life.

Light & Shade – contrast in height & figure
nothing is independent, ~~in~~ and nothing pleases
alone in the Works ~~of the Creator~~. nature.
Contrasts & mixtures form all that is beautiful
and agreeable in the works of nature ~~they~~
Condiments appear to be intended to act ~~upon~~
in the following ways. They act upon the tongue.
this organ is

mead, metheglin and what are called
home made wines. The ~~two former~~ mead ~~first two~~
~~are~~ is made of ~~honey~~ one part honey,
with four parts of water fermented with
aromatic herbs, or roots. It is a cooling ~~the metheglin~~
and pleasant summer drink. metheglin
is made of one part honey & two of water.
~~It is less aqueous~~ It is too luscious to be
taken in a large quantity. ~~All the~~ Most of
the soft summer fruits of our country,
~~the~~ afford by fermentation ~~when a~~ with the
addition of a small quantity of sugar,
and a little brandy, an agreeable liquor
~~re~~ resembling the wine of the grape.
That from the currant is generally
preferred to all others. [It is prepared
in the following manner.

& meals, and always in a diluted state.
To remove the debility and fatigue which
occur at those times, they are generally
offered to visitors, but a cup of chocolate,
a biscuit ~~or~~ a sweet cake, or a little
fruit should be preferred to them. Dr ~~the~~
Franklin when a young man surprised
his ~~brother~~ fellow labourers in a printing
office in London whom "he saw swilling
porter in the intervals of their meals
by eating occasionally a roll of bread.
"You exhilarate yourselves (said he
to them) by taking the spirit of grain
only, I am refreshed and strengthened
by its substance." —

several of   the liquors
To ~~all~~ ~~Beer and~~
~~all the~~ ~~wines~~ that have been named,
~~are improved by~~ certain Additions are
sometimes made in order to improve
which have been
their flavor or taste called Condiments.
wormwood hops - ginger,
These are Rosemary - anise root - ~~hops~~,
Indian Cockle - henbane & even Opium,
but they all detract from their Virtues,
and some of them render them ~~hurtful~~
unfriendly to health & life.

All these fermented liquors should
be taken sparingly in the intervals of

Distilled Spirits are obtained from all the grains & particularly from Rye, from Wine, ~~and~~ but chiefly from the Sugar Cane. They contain a small quantity of Acid, and a large quantity of Spirit ~~water~~ diluted with water. They do not contain a particle of Saccharine matter; of Course they do not afford any more nourishment to the body than water. They are hurtful in every form in which they are <u>habitually</u> used, whether alone or in what are called Slings, toddy or Grog. They are least hurtful in punch, for in this liquor, the Acid of the limes blunts the Spirit, while the water dilutes it, and the Sugar supplies it with a small portion of nourishing matter. ~~This is~~ I ~~not~~ have endeavoured in Another work,

+ This thermometer was published by the Author in the Columbian magazine in the year

to point out the evils which these bane-
-ful liquors have brought upon the body
and Soul of man. Had I a thousand
pens, and each of them furnished with
all the powers of ancient & modern elo-
-quence, they would not be sufficient to
describe in suitable language the numerous
~~and awful~~ diseases ~~of~~ and vices that have
followed their use in every part of the
world. + I shall only subjoin here a
concise ~~view~~ ^amount of ~~the relative~~ ^their influence upon
~~[illegible]~~ ^health and morals with a relative view ^of the influence
of ^other liquors ~~up~~on the same objects ~~in~~
~~the form of a~~ upon a Scale which I
have called a moral & physical thermo-
-meter: + ——

& from a tincture of it being absor=
=bed by the Lymphatics of the stomach
into which it descends in large quan=
-tities — it injures the voice when used
in the form of Snuff by obstructing
the nose —

Related to distilled Spirits in its pernicious influence upon health is that loathsome Weed called Tobacco whether used in Smoa=king, Chewing or in Snuff. ~~It impairs~~ ~~weakens~~ It depraves the appetite – weakens the digestive powers, – induces tremors – impairs the memory, brings on low Spirits, tinges the skin of a yellow color, & disposes to consumption it produces emaciation of the body, and from the debility and thirst which follow its use, it often leads to intemperance in drinking. – ~~As~~ But its evils extend further – ~~it when used as snuff it injures the Voice by obstructing the nose, and in to some times~~ it imposes ~~a [illegible]~~ upon the persons who use it, a clamorous ~~[illegible]~~ & tyrannical artificial want, – It makes a large inroads upon ~~and~~ the common life upon property, and it is contrary to that cleanliness of person and apartment which ~~[illegible]~~ if ~~with associated~~, is closely allied to ~~with correct ideas of~~ ~~both~~ health & Virtue. Citizens of the United States

the ~~tumbler~~ of brandy ~~[illegible]~~ bottle & the segar

Snatch ~~the segars and the flask of brandy~~

with ~~[illegible]~~ prompt authority from

the hands of your Children! Save the

human figure & character in the persons

~~generations that are to follow us from~~

of your posterity from those ~~late vices~~

~~those the evils that impend them from~~

~~the habitual use & example of their father~~!

~~and wilful~~ foes to health and life. They

are greater enemies to our Country

than the late orders of the British Council,

~~and~~ or the decrees of the French Emperor at

Milan.—

513-1

Having enumerated the principal ar-
-ticles of Aliment and the Drinks in
use in our Country. I proceed now to
make a few remarks upon the manner of
using them, so as to derive the greatest ad-
-vantages from them ~~and to suffer the fewest~~
~~inconveniences from it~~ as the means
of preserving health and ~~pro~~ life.

I am aware ~~that~~ the long and
healthy lives of ~~many~~ people who have
lived ~~in~~ intemperately & viciously both in eating and
drinking, ~~set aside~~ ~~bid defiance~~ are opposed to ~~with want people to~~
all principles and rules upon this subject.
~~But to~~ Persons who are influenced in their
opinions of the ~~advantages~~ inefficacy of
Temperance ~~upon~~ upon health & life by those
solitary instances, resemble men who from a desire of becoming suddenly rich
waste a their estates in ~~lottery tickets~~ purchasing ~~without other~~
~~waste capitals in Lotteries~~ ~~Dying to~~
~~lottery~~ tickets in Lotteries.

V nor is it any objection to the Utility ~~or certainty~~ of Rules for the preserva-tion of health and life that many persons feel no disagreeable effects from ~~the~~ daily ~~a~~ transgression of them for years together, as far as they relate to Aliments and Drinks. ~~a~~ The patient submission of the Constitution to ~~these acts~~ these Acts of violence that are committed upon it, no more prove them to be innocent, than a quiet conscience is a justification of an immoral life. Such persons usually *snap*, to use an English phrase, that is, die suddenly, ~~from~~ or they perish ~~in~~ by feeble diseases, or pass a sickly & miserable old age.

53.2 without considering what an immense number of people are made poor by them.

I am aware further that age, ~~season~~, occupation, climate, ~~occupation~~, ~~habit~~, idiosyncrasy &c, the disposition of sound parts of the body to perform vicarious offices for such as are ~~weakened by~~ predisposition ~~to disease~~ by debility to disease, and above all habit, combine to exert a powerful diversion from the uniformity of ~~influence upon the~~ operation of diet and drinks upon health and life, but after making the largest allowance for them all, I believe with the exception of one person in twenty the relations of cause and effect by means of impression or stimulus in the human species are nearly as uniform as ~~they~~ are upon vegetables and inanimate machines. A definite portion ~~force~~ of ~~sun~~ heat and moisture ~~a~~ is necessary to healthy vegeta-tion, and a definite or precise force of wind, and

V ~~ops~~ in ~~its influence upon~~ obviating the uniform
effects of diet and drinks upon the body,
has its limits, and where it ~~disarms them~~ ~~is inoffensive~~,
~~it~~ renders their excess, or bad qualities ~~of~~ inoffensive,
it is ~~often~~ because they are opposed by coun-
-teracting impressions. Thus the Indian
suffers less than a civilized man from a
gluttonous meal of animal food, because
~~he at first sleeps off~~ he throws off its oppression
first by sleep and afterwards by the exertions
of hunting and war – thus too the day la-
-bourer suffers less from drinking a bottle
of spirit in a day than a person who
~~profess pass~~ passes his time in a sedantary
employment, because he ~~counteracts its~~ opposes to it
the counter stimulus of labor.

11 a necessity ~~for~~ upon ~~bringing~~ the members of a family, friends & strangers to meet together two or three a day, ~~together, two or three times a day~~
and thereby to serve encrease knowledge, and to pro-
-mote Domestic and social happiness. and 3 ~~this~~ they are calculated
to remind us of our constant Dependance upon the goodness of
Being who created us, and who daily supplies us
with our daily bread. — Johnson's Speech

water produces the greatest possible effects
upon a mill and a boat, that are com=
=patable with ~~the~~ their preservation ~~of their~~
~~texture~~ from injury or destruction. — the
same thing is true, with respect to the
agency of aliment and drinks upon
the body. — Even habit ~~the most~~ so powerful

These remarks being premised I
2 pass on to mention certain general
rules upon this subject
which apply nearly alike to a great
majority of mankind. Before we enter
upon them, it may not be amiss to inquire
1 why we are subject to the ~~frequent~~ daily returns of
appetite, and why is not one meal sufficient to
support our bodies for a week, a month, or a much
longer time? I answer ~~for this~~ ~~we are subject to~~ we have
the daily returns of appetite for the ~~wise~~ following benevolent
purposes ~~of the~~ 1 ~~increasing~~ They multiplying and
increasing the pleasures of the table. ~~2 of the~~
2. ~~It improves it~~ They impose ~~it~~
~~perfecting knowledge and social happiness~~

1 ✓ The Appetite is sometimes an unsafe Guide in regulating the Quantity of food, inasmuch as it ~~is~~ often ~~disproportioned to~~ exceeds the Strength of the digestive powers, and the exigencies of the System. It is ~~always always~~ a good practice always to Abstain from eating where ~~there~~ is the least ~~doubts~~ ~~hesitation~~ Deliberation whether enough has been taken. As in morals he that Doubteth, and acts, is condemned, so he that Doubts and eats, never fails to suffer by it.

2 The ~~appetite~~ taste is likewise an unsafe Guide in determining the Quality of our aliments, for we sometimes find such of them as are agreeable to ~~the taste~~ that Sense, produce disagreeable effects in

54. ~~55.~~ V

4 ~~this~~ The Quality of food and drinks should regulate their quantity. Much less of meat should be eaten than of vegetables, and less of ~~of~~ bread, than of fruits. ~~As~~ While two pounds of Beef, or mutton, and the same ~~weights~~ Quantity of ~~vegetables~~ bread and ~~drinks~~ table beer are suffi-cient for a labourer for four & twenty hours, ~~a Persian~~ four times the Quantity of ~~simple water~~ garden vegetables with simple water may be taken by him with safety in the same time. A Persian, Chardin tells us, feels no inconvenience from eating thirty pounds of water melon in a day.

~~4~~ 5 Size ~~and fat~~ influences the Quantity of food necessary for the support of ~~animal~~ life. A large ~~man~~ body requires more to nourish it than a small one, and fat people, ~~from~~ the less diameter

the ~~system~~ Stomach.

B Even the cordial reception which the Stomach gives to certain ali=
=ments is not always a sign that they are ~~un~~friendly to health. for we sometimes observe head ach - sleepi=
=ness, and ~~sensations upon~~ feverish symptoms induced by aliments that ~~g~~ excite no sensation in the sto=
=mach. —

turn back to 4

or capacity of their blood vessels, require less aliment than such as are man, ~~persons~~ under equal circumstances.

6 A mixture of ~~certain~~ aliments which disagree ~~agree~~ with each other in the stomach ~~better than others~~ should be avoided. ~~[illegible]~~ The ~~fish and~~ flesh of land and water animals are often indigestible when taken together. The same thing is true of milk & fish. It is probable all ~~the~~ aliments & drinks have the same affinities or repugnance from each other that are observed in chemical bodies. They can only be found out ~~discovered~~ by experience, but this discovery will amply reward the labor in making it.

7 ~~The [illegible]~~ Great advantages will arise from making the principal meal every day upon one dish. The appetite for food should be regulated by

a note text of Scripture

+

~~54-1~~
~~50~~-1
55.1

the same laws that are imposed upon the sexual appetite.+ ~~They are both to~~ Variety in the objects of both, leads to excess, and does equal violence to the constitution. How often do we observe the appetite ~~persons~~ apparently satisfied with one dish, excited afresh by a new one, and when indulged, ~~the consequences of a~~ languor and its con-sequences in indigestion and plethora brought upon the system. This limitation ~~singularity~~ of the appetite to one dish ~~is~~ ~~should extend only~~ is meant to extend only to animal food. A variety of ~~vegetable~~ vegetables may be taken with it with safety and advantage.

~~+~~

~~54.2~~
~~8~~.

55.2 [We sometimes see a succession of genera-tions who cannot eat fish, eggs, or certain fruits. —

5 certain aliments that are grateful to the taste, and ~~inoffensive~~ acceptable to the stomach produce disagreeable effects in other parts of the body. the head ach, and eruptions upon the skin are sometimes induced by aliments that excite ~~ni~~ no sensation of any kind in the stomach.

These general remarks being premised, ~~I go on to ex~~ we are led in the next place to inquire into the times and manner of taking our aliment.]

6. There are in general three, and in some families four times of ~~tak~~ eating in a day. The ~~duties of~~ business & duties of civilised life have made these times

of eating necessary, but there is reason
to believe that man like the horse,
and some other animals was intended
to eat always, or rather a little, and
often. Children and old people ~~both~~ in
whom the ~~male~~ instincts of Childhood
are revived, bear with difficulty the
intervals between regular meals.
The Indians ~~likewise~~ who live agreeably
to nature, eat often when they abound
with aliment. They even rise from
their beds Mr. Bartram tells us in his
travels through the southern states in
order to eat in the middle of the night.
The constant action of a small quantity
of food in the stomach is more favoura=
=ble to the equable circulation of the

blood, and the equable excitement of
the nervous system, and of course more
favourable to the good health, than
the alternate languor & excitement
~~an~~ which follow an empty stomach,
and a full meal. A small quantity
of food moreover when digested is more
easily thrown out of the stomach than
a large quantity, and in a much shor=
=ter time. I suspect the general &
& intemperate use of ardent spirits,
opium and tobacco has arisen from
the long intervals between meals which
make their stimulus necessary to
supply the absence of the stimulus
of food. It is true they are often called
for after a meal, but it is only

when the system is so much depressed
by excess in eating as to render their
stimulus necessary to remove it. But as

Custom ~~which~~ has divided our meals
into three and four in day & has made
one of them more ~~which~~ plentiful than
all the others; ~~In the United States this~~
~~plentiful largest meal is taken from~~
~~at different times between the hours~~
~~one to three about soon after~~
~~the middle of the day. of one and~~
~~3 o'clock in the afternoon.~~ it remains
to be determined at what time this large
meal should be taken. ~~for~~ The old Romans
made their principal meal in the evening,
after the labors and studies of the day were
finished. The Arabians Niebuhr tells us,
follow the same practice. The coolness of
the evening air in their hot country invites the

appetite, and renders society ~~more agreeable~~ less
disagreeable from a number of people
crowding around a table. ~~It is not~~ The
~~rest which follows a full meal in~~
~~the evening favours tranquillity of the~~ The dismission ~~from~~
~~mind from~~ of the cares of the day from the ~~[illegible]~~
~~the~~ mind gives a higher tone to convivial
pleasures in the evening than at any
other time, and these we know ~~are to~~
are calculated to promote the health of
the body. The rest moreover which
follows this meal tends very much
to promote digestion. Of this experience
furnishes with many proofs. Nor have
experiments ~~been~~ wanting to establish
this fact. — Dr Harriot.

V While rest favours or accelerates digestion, it is certain sleep has a contrary ef=fect, but it does not follow from this circumstance that food is less healthy upon that account. Perhaps it may be more completely digested by its longer detention in the stomach, and there can be no doubt but its influence in keeping up the actions of life in the sleeping state is greater when confined in the stomach, than when diffused through the intestines in the form of Chyle. Sleep after a full meal should be carefully avoided, for the sto=mach when unduly distended presses

=rly, whether they be one, two or
more in day, should be taken at
the same hours. Nature expects them

But should the influence of habit con=
=tinue to render the middle of the day,
or ~~one~~ two or three hours after it, the
time for eating the principal meal, it
will be proper to avoid labor and exercise
soon after it. If sleep should be indul=
=ged after dinner, it should never be
in a horizontal posture. Augustus we
read slept after eating a full meal, but it was only
in an Arm Chair. The Portuguese ~~often~~ sit down
upon the floor and sleep with their arms supported by
two chairs, and their backs, by a wall
after dinner.— Care should be taken

upon the adjoining viscera, and upon the descending aorta, and thus disposes to colic & apoplexy. –

V 9 meals, whether they be one, two or more in day, should generally be taken at the same hours. Nature expects them, and useful associations in the animal Oeconomy are destroyed when she is not gratified. This is most proper & most practicable in the evening of life. –

when persons sleep in this sitting posture
that the neck be perpendicular with the
body, otherwise the ~~circulation~~ passage of the
blood will be obstructed to, or from the
brain. —V

10 It is a common practice in some
parts of the United States to take a glass of
wine ~~an~~ with bitters before dinner. The
practice is a bad, inasmuch as it ~~it either~~ excites the
appetite beyond the digestive powers of the
stomach. ~~or it destroys~~.

11 ~~It is a common ... of most tables to~~
~~drink~~ The less ~~we~~ drink that is taken at ~~with our~~
~~food~~ before we have finished the animal
part of our meals, the better. It acts
~~by stimulus~~ if it be wine, or malt liquors,
by stimulating the stomach, and thus
prompting to eat more than the system

requires. If ~~it~~ the Drink be more simple, and taken
in a large quantity & beyond the proportion
to solid food formerly mentioned, it ~~the~~
Dilutes the saliva and gastric juice so
as to weaken their dissolving powers, &
~~bar~~ by elevating ~~floating~~ the food ~~upon it~~ from
the surface of the stomach removes it
beyond the action of the latter, and ~~of~~ finally
hurries it into the intestines before it
is completely digested.

12 There have been disputes among physicians
Whether food should be taken hot or cold.
It is peculiar to the human species to
take it in the former way. Even the
rudest nations prefer it ~~after its bar~~ warm
from the fire. It is certainly more
savoury in this state, and if it be more
easily digested when cold than hot, it

must be ascribed to ~~the influence of time~~ its ~~being~~ having been kept longer before it is eaten. ~~upon which it was [illegible]~~

13. The practice of Carving or cutting certain kinds of food at table, has an unfriendly influence upon health. Most of people sit down to dinner in a state of debility from labor or hunger. To contend with a tough goose or turkey, or a peice of ~~dis~~jointed meat in this situation for a ~~three~~ quarter of an hour ~~wastes the [illegible] of strength brought to~~ increases the weakness of the body, and thus impairs the strength of the digestive powers. It moreover exposes the persons who have thus lost fifteen minutes in Carving to the necessity of swallowing their food without masticating it sufficiently in order to avoid the ~~suspicion~~ singularity of eating alone. I say nothing

a note

+ The late Anthony Benezet once went into the house of One of his brothers at the hour of dining. He asked him to sit down and dine with him upon some poultry which was placed upon the table. "What! said he would you have me eat my Neighbours?" Had it been served in another form, so as to have concealed its shape, he would probably have dined upon it without asking any questions.

here of the mischief done to table Cloaths,
and dishes by this practice, nor of the
remains of savage taste which is discovered
by sitting down to devour our domestic
Animals in the same shape in which
they have pleased us with their beauty, or
innocence while they were alive.+ The Chinese
and the French nations always conceal the
shape of the Animals upon which they feed
by their modes of cooking them,
that it is ~~often~~ difficult to ~~tell~~ ~~what Class of~~ to
tell ~~to what Class of~~ whether they were taken
from the air or the earth. Hence the Knife
is in part banished from the tables of France
and the ~~fork and the~~ ~~as well as the Knife is~~ Spoon supplies in a great measure
~~make~~ the want of both the knife & fork
in China. In some parts of Sweden and
Denmark Mr Cass tells us in his ~~northern~~ summer

14 V There should frequent changes, or a ~~regular~~ rotation in the Use of the different kinds of aliments particularly of flesh. This is necessary to keep up the pleasure of eating, and perhaps the salutary effects of food. It is from that disposition which the taste has to be satiated with one kind of meat, that that the beef, mutton and hog butchers, seldom live upon the flesh they respective=
=ly prepare for the market. The disrelish and even antipathy which some men express for particular meats arises frequently from their having been fed when school boys exclusively upon it.

excursion to those northern Countries ~~ca~~-

~~their~~ dishes of animal food ~~are~~ are cut up

~~this~~ ~~Carving is performed~~ by Servants

before they are brought to table.

v

15 ~~to persons~~ Great benefit will arise to

health from the occasional ~~fr abs~~ diminution or a total abstinence from it

of the customary quantity of our food ~~at~~

this rule should be practiced ~~at all ti times when we~~

~~are a little indisposed — in extreme weather~~

~~weather~~ at the following times and under

the following Circumstances.

1 When the body is a little indisposed

from cold, or any other cause. The

celebrated player Mr. Maclin ~~who lived to~~

~~near 100 years of Age~~ never had a fit of

sickness during his long life which ex- ~~made~~

-tended to nearly an 100 years. ~~He promoted~~

the means that procured him this exemption

from attacks of disease were always to

abstain from ~~solid~~ food as soon as he

V The Indians always fast in their slight indispositions. To allay that uneasiness in the stomach which arises from emptiness they eat a little of the root of the Spikenard which keeps up a gentle action in the stomach, without imparting any nourishment to the body.

felt himself indisposed in the smallest
degree - to go to bed - and to drink dilu= ~~Indian practice~~
=ting teas only for two or three days. ~~+~~

2 ~~Also~~ the quantity of food should be
lessened in very warm weather.

3 It should be lessened during the preva=
=lence of violent and malignant fevers.

4 In all sudden ~~[illegible]~~ and laborious
enterprizes ~~exertions~~ of the body or mind which are
intended to be of a short duration, great
advantages will arise from a diminution
of the ordinary quantity of food. Dr
Jackson has furnished some striking
proofs of the efficacy of this practice
upon himself in the West Indies.

5 Persons who live much in convivial ~~[illegible]~~
society should fast at least once a

among the Catholics
week. the Custom of dining upon ~~the~~
fish every friday is a good one. ~~and~~
~~lessens the labour of the System~~ It is a relative
as ~~it~~ was formerly remarked
Abstinence, for fish contains much
less nourishment than flesh. Sir John
Sinclair, mentions an instance of a great
feeder who in London lived much in Company who
dined upon a single egg every Sunday.
Dr Franklin made it a ~~practice~~ rule to
while he resided ~~at~~ in France as Mi-
-nister from the United States, to refuse
all invitations to dine out on a certain
day of every week. On that day he
retired to his bed Chamber, and lived
entirely upon weak ~~[illegible]~~ tea. He
gave as a reason for this practice, that
it "was necessary to give nature a
holiday once a week in Order that
she might clean out her Streets". In

V 6 Abstinence is highly proper before ~~and painful~~ persons submit to such ~~difficult~~ surgical Operations as will probably be followed by an inflammatory fever. ~~as~~ The Indians live sparingly before a battle by which means wounds not made in vital parts heal much sooner than the wounds of Soldiers in the Armies of civilized nations.—

all cases of ~~fasting~~ abstinence, liquids of some kind should be taken. The system is more benefitted by it, than when the sensation of thirst is added ~~to~~ to that of hunger. The system suffers less likewise from the temporary abstraction of food than it does of drinks. — V

~~16.~~ Nature it is said abhors a Vacuum. It is equally true, she is unfriendly to ~~?~~ too much Uniformity in eating & drinking whether it relate to quantity or quality. However ~~this~~ necessary ~~this~~ away to be cure diseases, it does not always prevent them. In the intercourse with the world which business, travelling, & social pleasures ~~renders~~ render necessary for most men, it is impossible to carry a

pair of Scales, or a measure to determin
the quantity of ~~the~~ our food; for which
reason it will be necessary to avoid too rigid
habits in eating and drinking. To inure
the System to eat of every thing, and at
any time will be useful in the present
State ~~of~~ civilized society. A little excess now
and then ~~has~~ is often as necessary and
salutary as a little diminution of our
food and drinks. — It fortifies the system
against diseases from causes over which
we have no controul such as the
vicissitudes of the weather, ~~and~~ It gives
a gentle fillip to nature, and ~~quickens~~ prevents her
~~her operations~~ forgetting to keep all her
passages open, and all her wheels in motion.
The late Dr Cleghorn of Dublin belonged to a Club
that dined together once a fortnight.

v Short, he does not know all the harmless pleasures of eating who does not depart now and then from his ordinary habits as they are related to the quantity and quality of his food, — any more ~~than~~ he knows not the pleasure of a feast, who fares sumptuously every day.

61-2

~~the Doctor~~ For two or three days after meeting this Club at which he ate and drank a little more than he did with his family he used to say he enjoyed better health and spirits than he did on any of the intermediate days.

The fresh supplies of ~~of~~ health & spirits & even the blooming color which many people bring home with them from ~~short excursions~~ short visits to their friends whether in town or country, and in some instances ~~from~~ from ~~to~~ mineral springs, and the sea shore, I believe are often the effects of ~~fresh vigor being to~~ the calm in their systems being removed, by the ~~invigorating~~ additional quantity of food and drinks ~~which~~ friendships & hospitality, or company disposed ~~to~~ ~~disposed them~~ them to take; or forced upon them. In

~~15 Food should be well masticated before~~

& education in youth, and by a few resolute experiments in every stage of life. —

17. There is in some persons what is called Idiosyncrasy, that is an inability to eat or drink, or to digest, certain aliments and liquors ~~that without being injured by them and~~ which are ~~inoffensive~~ pleasant to ~~common~~ the taste, and inoffensive to the stomachs of other people. ~~It is common~~ This idiosyncrasy is ~~either~~ hereditary—native, or acquired. It is ~~proper~~ common to humour it, and where the ~~antip~~ ~~discord~~ ~~between~~ antipathy of the taste & stomach is to those ~~& aliments~~ aliments & drinks only that are seldom met with in company, no inconvenience can arise from so doing; but when it extends to ~~several~~ numerous and to common articles of ~~it~~ Diet, the antipathy should be conquered. This has often been done by a proper

18 Food should be well masticated before it is swallowed { the following experiment will show the necessity of attending to this rule.

Many diseases of the stomach arise from the neglect of this rule. It is often induced by too keen an appetite - by extreme hurry of business, - by absence of mind, by conversation and by drinking ~~toasts~~ healths. The last ~~subject is hurtful has~~ produces this effect by obliging persons to swallow their food before it is masticated ~~in order~~ to order to express their thanks to the person who drinks to them. The practice of drinking

health moreover proves hurtful to young people (who are modest) by disposing them ~~if they~~ not to drink at all, rather than ~~publickly~~ interrupt half a dozen or a dozen persons who are intent upon eating by rudely addressing them ~~with a loud~~ in an elevated tone of Voice, with good wishes for their health.

In order to masticate food properly, the teeth should be in a sound state. Their importance ~~not~~ only to health but to Speech, & beauty, ~~as well as to health should have~~ renders a knowledge of the method of preserving them an essential part of ~~a system of~~ the present work. I shall therefore deliver a few directions for this purpose.

63-1

Means ~~for~~ of preserving the teeth &
supplying the ~~def~~ want of them.

1 Let the milk teeth (as they are called) or the first teeth, be extracted as soon as they ~~become lose~~, in order to enable the second teeth to project in a strait & regular manner. If ~~any~~ the least disposition appears in any of them to grow irregularly, let them be kept strait by means of gold wire, or by drawing the adjoining milk teeth before they are lose. Crooked teeth, like deformity, in other parts of the body, always dispose to disease. They ~~grow~~ are apt to ~~rally~~ decay soon, while regular and handsome teeth are generally lasting.

2 In young people we sometimes observe a single decayed tooth, with every

v ~~for~~ In this respect the teeth resem=
=ble plants which suffocate & destroy ~~one each other~~
each other: if they grow too ^closely^ ~~closely~~.
the decayed tooth——

Other teeth, sound and beautiful. This decay in this ~~solitary decay decayed~~ tooth is produced by the pressure of the adjacent & surrounding teeth upon it being so great as to deprive it of its nourishment, ~~It~~ should be extracted immediately or ~~the decay~~ it will ~~infect~~ spread its Disease ~~all~~ through the whole jaw. I am indebted for this article of advice to the late Dr Spence who confirmed the truth of it by the practice of many years.

~~3 Remove a ~~damaged~~ decayed tooth as soon as it is perceived, more especially if it be unstable ~~becomes painful, or as soon as it becomes so loose without being decayed, as not to be useful in chewing~~ to bear the pressure of food ~~of food~~ upon it. A tooth when it ceases to be used, ~~projects from its socket, and becomes feeble, affects the~~ is apt to pro=ject~~

3 Remove a decayed tooth as soon as it is
(Unless ~~it can~~ be the decay can be stopped by gold
perceived, more especially if it be unable
leaf)
to bear the pressure of food upon it. The
reasons for this advice are as follow.

1 A decayed tooth exposes to great local pain,
from cold, and hot substances applied to it.
~~and when not painful~~ It is likewise an
inlet to many general diseases. I have
seen Epilepsy and indigestion brought on
by it, and cured by its removal, and
~~authors of~~ there are records in books of
medicine of headach, vertigo, and
Consumption being induced by it.

2 It affects, and corrupts the teeth
that adjoin it, or that are above, or
below it.

3 It ~~taints~~ renders the breath offensive,

and sometimes taints the food ~~that~~

~~and~~ and thus brings on diseases of the

stomach and bowels.

4 From a decayed tooth not being

used, it is apt to project

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from its Socket, and to become elongated.
But this is not all - from the want of
exercise of the ~~tooth or~~ teeth in the jaw
above or below it, the gum becomes diseased the tooth ~~they likewise project~~,
~~and become~~ loose, and projects and hence we observe the
loss of the fore teeth of the upper jaw, to be
soon followed by the loss of the corresponding
teeth of the lower jaw. ~~Horses ...~~ The
truth of this remark will appear more
evident by attending to the state of the teeth
in ~~of~~ horses that live altogether upon hay
or soft food. It disposes the incisores or
fore teeth of both jaws to project, from their
want of exercise in cutting the grass; in
consequence of which they are unable
to bring their molares or grinders together.
Horses that are kept constantly in a stable often die prematurely from this
cause. I shall in another place menti-
-on

V 3 Acquire a habit of exercising
equally the teeth of both sides the
jaws in eating. The saliva is thus
poured forth more plentifully upon
the food, and equal strength ~~and~~ imparted
to all the teeth.

the means of preventing it.

4 ~~Avoid~~ Avoid the early and intemperate use of Acids whether in unripe fruit, or in vinegar in diet, and the ~~~~ habitual use of the ~~~~ mineral Acids ~~~~ as medicines. The Nitric Acid is said to be the least hurtful of them. When it is necessary to use any ~~~~ of them for a considerable time, they should be diluted with Water, taken through a pipe so as to pass over the teeth without touching them.

5 Protect the head and jaws from Cold & a local fever by sleeping in a warm night caps in cold weather. By this means the warmth of the body is equalized in bed. The french people owe their excellent teeth ~~to their~~ chiefly to this ~~~~ practice and in a climate not too much less variable than

that of the United States.

6 Wash your jaws and behind your ears every morning in cold water, & your teeth with water a little warmed, by means of fire, or by standing all the night in the ~~up~~ open air of a warm chamber.

7 Wash your teeth after every meal, particularly after supper. The remains of food by stagnating a whole night upon them, becomes putrid, and sometimes so acrid as as to inflame the gums and losen their connection to the teeth. ~~from their connec-tion with the gums~~

8 Frequently and carefully remove the tartar from the roots of the teeth. It pre-vents their being duly nourished, and

& sensibility only to heat and cold, acids probably for no other reason than to ~~teach us~~ teach us to protect them from ~~to~~ the extremes of both in our aliments & drinks. —

thus loosens and destroys them.

9 Avoid the alternate ~~action~~ application of cold and hot drinks to them, especially in a quick succession. The teeth are endowed with

10 Avoid using the teeth for purposes for which they were not intended, such as cracking hicory nuts, bending nails, biting hard apples or other fruit, and even biting the ends of the nails, ~~or~~ and the ends of thread. Women weaken their teeth very much by the last practice.

11 Avoid the use of all acrid corrosive tooth powders, also too much friction of the teeth. The following composition has been found to be safe and useful, when rubbed upon the gums by

means of a ~~tooth~~ brush. Powder of Bark and Charcoal of each an ounce. Myrrh ~~two~~ half an ounce, Cream of Tartar two drams intimately mixed together. A weak solution of an Alkaline salt is likewise an excellent application to the gums. It dissolves the matters that insinuate between the gums & the teeth and thus prepares them to be more easily washed out of the mouth. It moreover corrects the fœtor of the breath from ~~?~~ decayed teeth. Soap and water has been used with Advantage for the same purpose.

11 Brown and black spots ~~?~~ upon the teeth should be removed by means of a

file. I have known the decay of the
teeth to be thus arrested through life

The inconveniences from the loss of teeth
~~arising~~ are such that Art has supplied
several substitutes for them. These are
human teeth purchased & extracted from
the jaws of poor people, and suddenly
fixed in the sockets of ~~the~~ decayed teeth
recently extracted. The ~~new~~ sound tooth
in this case does not unite with the blood
vessels of the sockets. This has been proved
by a wooden tooth becoming equally
fixed in the socket of a dog; also by the
root of the artificial tooth decaying and
dissolving in the socket while the Other
part ~~remains as sound as~~ of it ~~remains~~ perfectly sound. The
tooth adheres to the jaw bone therefore

~~only~~ exactly in the same way that
~~a~~ a nail adheres to a piece of wood. ~~A~~
~~dry tooth then~~ From the facts that have
been stated it appears that a dry tooth
~~would~~ (contrary to the common practice)
would have many advantages over a
recent one in being less disposed to decay
from being deprived of its juices, and
in being less apt to create inflamma-
-tion and ulceration from the acrimony
of those juices in a state of putrefaction.
I cannot recommend this practice.
It is ~~pain~~ inhuman, painful, tedious,
sometimes dangerous, and always tem-
-porary. The engrafted teeth seldom last
more than four or five years.
A 2nd mode of supplying the want of

teeth is by means of what is called pivot=
=ting. A piece of silver or gold is fixed
in ~~the~~ an artificial or natural tooth
in its dry state, and thrust into the stump
of a decayed tooth. ~~A tooth the~~ A tooth
or teeth thus fixed, serves the purpose
of speech and wear of mastification
for ~~a short~~ some ~~some~~ time, but the pivot soon
wears away, or the hole in the ~~sock~~
stumps of the ~~sou~~ tooth in the jaw
soon becomes too wide to hold the
pivot in a firm state. From ~~this~~ one
or both of these causes the tooth is ~~apt~~
to fall out in eating, & sometimes to be ~~I have known two~~
~~instances of its being~~ swallowed with the
food.

A 3rd ~~method~~ The want of natural
teeth is supplied by tying Artificial

teeth made of the teeth of the Sea Cow &c
by means of thread to sound teeth.
This mode is ~~the~~ most durable and
~~least~~ less inconvenient ~~of any that can~~ than either of
the two which have been mentioned. Two setts of them
shall always be in use, and they
should be changed every two or three
days. ~~Teeth~~ new sets should be used
every year or two, for as they wear
away, or are eroded at their extre-
-mities, they are apt when drawn
close to the teeth which hold them
to loosen them, and thus to cause
them to drop out of their sockets.

4 where all the teeth have fallen

& The use of springs, at the present day, has done away the fastening by ligature.

out, their loss has sometimes been supplied by a set so formed as to sit easily upon the gums of the upper and lower jaw, and to serve in a limited degree ~~all~~ ~~in many~~ all of the purposes of natural teeth. ~~The~~ A Description of them would be ~~neces~~ unnecessary in this place. ~~as~~ They ~~are~~ are made by most of the Dentists in the United States.

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Rules for the preservation of health
and life must necessarily be of a
relative nature. Age - [sex.] ~~Season and~~
Occupation ~~and also a~~ [and Season,] require diet &
drinks of an appropriate nature. I
shall therefore briefly [apply] ~~mention the~~
~~rules that have been mentioned to~~
mention ~~the quantity and quality of~~
~~the aliments and drinks which are~~
~~most proper for each~~ [mention] a few circum-
-stances which should regulate the
diet and drinks proper for each of them.

Children ~~require~~ possess more irritability or a greater disposition to be be acted upon by Stimuli, than Adults. They require likewise food for the double purposes of promoting their growth and supplying the daily waste of their bodies. It follows of course that their Diet and Drinks should possess but little Stimulus, and that it should be of the most nourishing kind. — ~~so~~ From what has been said in the history of Aliments and Drinks, it must be obvious, that milk - the grains vegetables, & fruits -- ~~with should~~ with simple ~~compose the former~~ ~~and~~ water are most suitable for them. ~~The robust Constitutions of the~~ The firmest Constitutions in Europe and America have grown out of the potatoe, oatmeal and Indian Corn

mixed with milk, or sugar or molasses.
As ~~they~~ children advance in years they
may partake of weak tea & Coffee, weak broths, and fresh fish,
~~both of which was~~ with a moderate
quantity of boiled animal food. The less
it is ~~ss~~ seasoned the better. Condiments
such as salted meat & salted fish should
be withheld from them ~~at~~ with their
breakfasts and suppers when those meals
consists of tea, and Coffee. Butter should
be ~~used by~~ given to them sparingly; –
~~and~~ Sugar may be taken more freely
with their aliments. a teaspoonful or ~~provided it be~~
more of it taken in the morning has
been found in many families effectually
to prevent all the diseases which are
produced by worms. From the rapid
Digestion which the above aliments
undergo in the stomachs of Children
they,

should be indulged in eating often. A crust of bread, or a roasted potatoe should always be prepared to meet their appe=-tites in the morning ~~and~~ when they return from School. ~~Wine and Spirits~~ ~~should are~~ Malt liquors and Wine should ~~Nor~~ be given to ~~tasted by~~ them in a diluted state in small quantities ~~without great caution~~, ~~and that only~~ in the summer months, ~~Ardent~~ in order to ~~they want to~~ protect their bowels from the usual disease of hot weather. Ardent Spirits should never be tasted by them.

To these rules there should be exceptions in favor of Children that bring into the world, ~~for~~ or acquire in infancy, feeble constitutions. ~~Tea~~ for ~~such milk and~~ ~~vegetables alone are~~ Such children require animal food of ~~the most~~ a cordial nature,

and a constant but moderate quantity
of malt liquors or Wine. ~~I have seen~~ a
~~facts~~ They are the remedies of the Constitution,
and as much indicated in such cases as
medicines are to cure their diseases.

In youth the ~~appetites calls for animal food &c~~ blood vessels are irritable and the nerves sensible in a high degree. The least excess in either of them, disposes to, and often produces diseases, particularly fevers and hemorrhages. ~~the diet ought~~ The appetite in this stage of life is often keen, and calls ~~chiefly~~ for animal food. To prevent the diseases to which the system is predisposed at this time the quantity of food should always be less than the appetite calls for. ~~Boiled~~ Broths ~~meats~~ should be preferred to solid meat, and boiled meat to that which is roasted, or broiled. Malt liquors, wine and condiments should be taken spa=ringly, ~~and ardent spirits never~~ with ~~their~~ meals, but at no other time, and ardent spirits - never. Pastry

made in the most simple manner, and ~~abounding~~ mixed with fruits, serves to blunt the appetite for animal food, and thereby to lessen the use of it. It should therefore form a material part of the diet of all boarding schools. There are few young people that are not fond of it.

In middle life, ~~the diet and drinks~~ the system undergoes a change. Irritability and sensibility are ~~in a more~~ nearly in an exact proportion to each Other. It is moreover the period of ~~bod~~ great bodily and mental exertion; of Course ~~[illegible]~~ ~~[illegible]~~ diet and drinks of a ~~more~~ cordial nature are required to supply the ~~the~~ rapid expenditure of the strength of the body and vigor of the mind. To ~~[illegible]~~ ~~this~~ persons of ~~[illegible]~~ this age, I shall only ~~[illegible]~~ ~~to~~ recommend an attention to the Rules which are annexed to the history of diet & drinks, and advise them further to recollect that Good health like money is a Capital, and that the more Oeconomy is used in expending it in early and middle life the more will be laid up

for Old Age. For wise but not obvious reasons, the system often suffers the injuries that are done to it, for many years in ~~for many years~~ patience and silence ~~the injuries that are done to it in early and middle life;~~ but sooner or later there is an end to this forbearance; ~~but it does not always forbear~~. The ~~overflowing bumpers~~ the rich ragouts, the undue and oppressive loads of mere simple animal food, the improper mixture of aliments, and the bottles ~~&~~ instead of glasses of wine which have been swallowed with them, ~~will revive years afterwards~~ ~~in the forms of~~ ~~if they like the bees~~ do not ~~upon~~ subject to a premature death from ~~common~~ acute diseases, they ~~will~~ certainly revive in the forms of Vertigo, palsy, and apoplexy, and thus amply avenge the ~~abuse of~~ ~~waste~~ intemperate and sinful use of ~~the~~ the precious gifts of providence.

Old age may be divided into two periods,
the one beginning at 60, and ending at
75, - the other, extending from 75 to the
remotest term of human life. This
latter stage has been called decrepitude.
In the former period, the blood begins
to flow with languor, and is disposed to stagnate
in ~~that~~ those parts of the body in which the
force of the heart and ~~[illegible]~~ arteries is least
felt. The senses of seeing, hearing, and
touch become dull - and the tone of
the mind descends with that of the body.
The nervous system loses a portion of its
sensibility, but it acquires at its expense, an
increase of irritability, that is, it is more easily
moved by those impressions which act exces-
-sively upon it. The ~~[illegible]~~ ~~the teeth become loose~~ ~~this history of~~
appetite increases, while the teeth

~~or fall~~ drop out of their Sockets, or become ~~loose~~ ~~the state of the body in the first stage of old~~ so loose that it is difficult or impossible to masticate ~~Age it is evident that a~~ ~~there is nervous~~ with ~~its food~~ them, and there is an inaptitude to exercise, and ~~to~~ a disposition to prefer rest ~~to~~ labor. It is from this cause that ~~many~~ those persons who have led active lives and who have become independant in their circumstances, ~~at~~ between 55 & 60 years of age, often ~~become~~ lose their health, and are affected with all the diseases that arise from a languid circulation of the blood, and a want of tone in the muscular and nervous systems. In this stage of life, a material change should be made in the diet and drinks. The former should consist of articles rendered cordial by condiments, but not very nourishing. These should be soups ~~fis~~ ~~well boiled~~ meat so boiled, or otherwise prepared, as to be rendered easy of mastication, fish,

V The Attachment of old men to cordial Aliment is illustrated in the command of Isaac to his son Esau to render the venison "savoury" and "such as he loved" before he brought it to him.

VI ~~as the~~ ~~encrease~~ From the encrease ~~system bears with difficulty~~ and indulgence of the ~~the reduction of diet in this stage of life, the~~ ~~acute~~ ~~diseases incident to it should~~ ~~indulgence of it~~ appetite, and the diminution of exercise and labor, the blood vessels become overcharged with blood and the system becomes subject to all the diseases of plethora at this time of life. To remove them, - a reduction in the quantity of aliment is submitted to with reluctance, and is borne with difficulty & sometimes with danger. ~~by the system~~. The remedy for these diseases is small & occasional bleedings. They are safe and useful, and do less violence to the system than any other mode of depletion.

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pastry, fruits, Chocolate, tea & Coffee. The nearer ~~they~~ old people advance to seventy five, the Oftner they should eat. It has been common to call Wine the milk of old age. This is by no means a ~~correct opinion~~ true saying. From the increase of irritability in their systems of old men, a less quantity of fermented liquors of all kinds intoxicate them, than in early and middle life. Wine, Cyder, and malt liquors therefore should be taken sparingly by them, and always in a diluted state. The more thin & simple liquids they ~~take in their diet~~ drink the better within a certain degree. They are calculated to obviate that disposition of the fluids to rancidity, ~~one~~ obstruction, and the formation of gravel and stone in the kidneys & bladder which accompanies old age.

In that stage of life which has been called Decrepitude —

~~infantile Constitution. There is now not~~
there is
~~only an indisposition, but~~ an inability to
labour or exercise. ~~The~~ Diet ~~in this stage~~
therefore
~~of life~~ should ~~be cordial~~ ~~of taken nourishing~~
~~but not stimulating~~ supply their place ~~of~~
~~Nature~~ in supporting the actions of life.
for food,
Nature now calls ~~for~~ not only cordial
but sometimes for the fattest meats,
and experience shows that it is safe
and proper to gratify her. ~~For~~ As the
digestion is now rapid, ~~f~~ood should be
taken in the intervals between meals,
called for by hunger it
and ~~taken~~ ~~wakeful~~ ~~attend's~~ ~~like~~
~~extreme period of human life, food~~
should be taken in the middle of the
diluted
night. The drinks ~~in~~ should be ~~simple,~~
fermented liquors. Ardent spirits should
~~for the same reasons which were~~

√ From the greater irritability of the female constitution, Women require less stimulating ~~aliment~~ and nourishing Aliment than Men, ~~both~~ at nearly all times, ~~but~~ and particularly ~~at those~~ ~~periods~~ when the System is in a preternaturally excited, or inflamatory state, ~~that is during~~ from ~~the continuance of this monthly disease~~, menstruation and ~~and the time~~ of pregnancy. ~~An exception to this rule should be made the~~ Abstemious diet is strongly suggested by nature in the latter ~~case~~ state of the system by the sickness ~~in~~ at stomach and want of appetite which she induces during the first months after it takes place. ~~There is but~~ The only exception to this rule, ~~and that is~~ should be during the time of giving suck. The diet and drinks should then be of a more cordial and nourishing nature.

not be tasted.

~~mentioned in speaking~~ ~~breathing upon the~~

V ~~drinks proper~~ for the first ~~stage~~

Studious men induce upon their systems many of the diseases which are brought on by their ~~inactivity~~ inactivity of Old Age. The undue exercises of the brain ~~have the stomach~~ leave other parts of the body and particularly the stomach in a ~~and loss in a state of torpor~~ torpid state. ~~It~~ To obviate this torpor the diet should be gently stimulating, small in quantity, and not very nourishing. Wine may be taken ~~liberally~~ with this. It keeps up the actions of life without it, ~~food~~ adding much to the quantity of blood. ~~but~~

Coffee should be ~~preferred to~~ used liberally
by ~~this~~ this ~~whose~~ class of people. ~~[illegible]~~
It is ~~like [illegible]~~ a cordial ~~without~~ and
~~[illegible] adding [illegible]~~ adds scarcely ~~nothing~~
anything ~~more~~ to the nourishment of the body
~~than~~ but what is contained in the Sugar &
Cream or milk which are mixed
with it. Mr Poole ~~the author of~~ who spent ten years in writing a Synopsis
and annotations upon the bible, his Biogra=
=pher ~~says ever~~ tells us rose and sat down to his studies ~~to~~ at three o'Clock every mor=
=ning, eat a raw egg at 9 o'Clock and another
at 12, and after spending the ~~whole~~ afternoon
~~with~~ in his Closet, ~~left it in~~ passed the evening of
the day ~~which he passed~~ in convivial Society. ~~with~~
~~his friends.~~ Many of those Authors who
have ~~both~~ both instructed and delighted the
world ~~with~~ by their writings have lived
from necessity ~~upon~~ ~~the same~~ ~~on~~ equally scanty
~~fare~~ ~~fare~~ ~~that this portion of Aliment.~~
and perhaps owed their lives to a ~~less~~
similar ~~similar~~ portion of less nourishing Aliment.

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The diet for ~~[illegible]~~ persons who ~~follow~~ ~~[illegible]~~ are devoted to sedantary Occupations, should be nearly the same as for studious people. From the labor of their hands being greater, it should be somewhat more plentiful and nourishing.

~~the Aliments and~~

Labourers who employ all the muscles of their bodies in active employments ~~&~~ whether in the Open Air, or under cover, live ~~in a~~ at a great & constant ~~state~~ of expense of their strength ~~from~~ by ~~perspiration, and the~~ by perspiration and Otherwise. They re=quire therefore food that possesses the double properties of stimulating and nourishing the body. ~~the [illegible] the profits~~ ~~The former~~ It should be of such a nature as to prevent the loss of time in taking ~~[illegible]~~ frequent supplies of it into the Stomach. A day labourer upon a farm in Philadelphia County once ~~told~~ said to his employer who offered him a breakfast of bread and milk "I cannot work upon that diet - give me

something to eat that I can fill ~~all~~ in
my stomach till dinner time". ~~Food~~
~~those of digestion~~ He had found by Experience ~~had taught~~
~~him~~ that food slow of digestion, accorded
best with the waste of his strength by
labor. This should be. Salted meat,
particularly pork (which from its
fat ~~is ch~~ I ~~have~~ said is ~~both cheaper~~ more nourishing
than salted beef) smoked meat, - and fish
sausages - hard boiled eggs and ~~onions~~ onions. The
last of those Articles should form a
part of ~~the~~ every meal of labourers.
The Jews were enabled to ~~perform~~ comply with ~~the~~
the severe exactions of their task masters
in ~~the~~ the hot sun of Egypt, by feeding
upon onions and other alliaceous roots.
Sir William Temple says the Pyramids

+ O! dura messorum ilia"

V The Russian peasants obviate hunger by eating half ~~dou~~ baked bread & the Irish peasants do the same thing by eating half boiled potatoes. They produce that effect by their ~~the~~ indiges-tible quantities.

of Egypt were built by them, by which he meant, that those stupendous monu=
=ments of human industry & folly were erected by men who were fed chiefly upon onions & garlic. The toils of the harvest in ancient Rome were supported by a Diet of which Onions formed a part. Of this Horace mentions a proof in his contrast of the strong digestive powers of reapers, with his sufferings from having accidentally eaten of them.+

The Chinese Dr Barrow tells us add not only onions, but rancid Castor Oil to their rice. It serves like the Onions to retard the digestion of the rice, and to render labor more easy by producing a more durable stimulus upon the system. V

Upon the Diet of the three last classes of people, that have been mentioned,

~~I shall only remark that as the stimulating~~
~~the~~ The drinks of labourers should be simple,
and small in quantity, ~~more~~ more especially
in the former part of the day. The Indians
~~always~~ avoid drinking ~~in their~~ as much ~~stop to eat wh~~ ~~have reached that~~
as possible ~~until they~~
in their marches and hunting ~~in~~ excursions, ~~in the~~
until they stop to eat which is ~~about~~ never before the middle of the day.
~~Afternoon~~. They consider it as a mark of
youthful ~~folly~~ inexperience & folly to do
otherwise. It certainly impairs the appetite,
and ~~thus~~ weakens the body. Sir Robert
Wilson in his account of the English ex=
=pedition into Egypt in the year says
those soldiers ~~bore the heat~~ suffered least from the heat,
who only washed their mouths with water
without swallowing it. ~~Instead of drinking~~ Experience teaches
that ~~the~~ labor even in hot weather is ~~labourers will find~~
~~between meals, they~~
~~their strength supported much more~~

~~supported~~ borne much better by taking a little ~~eating, than~~ cordial aliment, than by drinking between meals. The Jews made use of figs for this purpose. ~~they~~ ~~utility~~ Their fitness for it is evident from wrestlers feeding upon them in ancient Greece. The Arabians Niebuhr tells us always carry Raisons & Onions with them when they travel ~~to~~ eat upon the road, in order ~~to~~ obviate both heat and fatigue. In the United States Gingerbread, biscuit and dried fruits have been found to be both agreeable and useful when used in the same way. ~~Biscuit, a peice of smoked meat, or the salted end of a salted beef's tongue might be taken by those persons to whom gingerbread is not agreeable.~~

The drinks of labourers, ~~with~~ whether in the field, or at meals, ~~of labourers~~ should consist of molasses and water - vinegar & water with a little sugar, ~~or~~ milk & water or

porter or Cyder and water. Ardent Spirits should be proscribed from the ~~innocent~~ haunts of ~~innocent~~ labor. They ~~are~~ alone convey into ~~and give~~ it the character and Consequences of a Curse. Without them, labor is a blessing in disguise. —

Upon the diet of ~~old men~~ people, Studious men, and labourers, I shall only remark further, that as Stimulus is one of the properties upon which the effect of Aliment in ~~supporting~~ ~~preserving~~ preserving health and life depends, would not ~~great~~ the same advantages be derived from the Stimulus of distention ~~which~~ in the Stomach which are derived from that of ~~a too~~ an acrid, or aromatic quality in food and Condiments? — The horse is invigorated by the ground Cob and the cut straw ~~which~~ which he eats with his Indian Corn & Oats. Both those insipid substances act chiefly ~~only~~ by filling his stomach. Many ~~[illegible]~~

wild animals are kept alive by taking matters into their stomachs which act in the same ~~[illegible]~~ = mechanical manner. see on famine — &c

influence of Heat and cold, ~~and~~ of
The ~~Seasons in the United States require~~
~~a peculiar kind of Aliments & drinks.~~
moisture and dryness, and ~~above all~~ of
~~them~~, the exhalations which sometimes
float in the Air under a peculiar
and specific kind of Aliments and Drinks
proper in the ~~four successive~~ different seasons of
the year. It will help to impress ~~the~~ correct ideas
~~Inflammatory~~ diseases prevail ~~chiefly~~
~~in the Spring of~~ upon this subject to remark,
the affinity between the four seasons and four of the most promi-
-nent stages of life. ~~and the Correspondence~~
~~between each of them and the Aliments &~~
~~drinks that are most proper in each of~~
~~them.~~ the Spring may be considered as the
childhood, ~~and youth~~ - Summer as the youth,
Autumn as the middle life, and Winter,

as the Old Age of the year. A striking Cor-
-respondence exists between the Aliments & drinks
that ~~are proper for the Seasons~~ have been
pointed out for those four ages of man,
and ~~the~~ four seasons ~~of the year~~ that have been mentioned.

In the Spring, animals ~~food is generally~~
~~poor and from its being the season in which~~
~~Animal~~ are generally ~~poor from and lean~~ poor
-~~healthy~~ from the ~~scanty~~ dry and perhaps scanty fodder ~~Aliment~~ of the
preceding Winter, and from its being the
time in which most of them propagate
their Species. ~~But there are moreover but~~ the Vegetables which it is necessary to mix with animal food are moreover
~~few vegetables at this~~ at this season ~~are~~
~~State,~~ Stale, ~~or in a worse State~~ and often ~~scanty~~ small in quan-
-tity; ~~for~~ which reason the principal
aliment ~~instead of~~ in the Spring should
consist of fresh fish, salted meat, or salted fish and succulent vegetables
such as Spinach - and asparagus]. The
System at this time above all others,

from the first impressions of the Vernal
Sun upon it, is ~~more~~ in a great degree predisposed to in=
=flammatory diseases; for all which reasons
the principal Aliment in the Spring
should consist of fresh and salted fish,
salted meat, and succulent vegetables
such as Spinach, asparagus & what are
called young Sprouts (consisting of.) It is a
Custom of the Oldest Christian Church
to enjoin ~~those to~~ a diet of fish alone
with vegetables during the season of Lent,
which includes forty days of the Spring
months. This institution is a truly
wise One, and should have been retained
by all those Sects that separated themselves
from the Church of Rome. It is calcu=
=lated to reduce the Quantity of Nourish=
=ment taken into the body, and conse=
=quently

to lessen plethora, and the predisposition
to inflammatory diseases. It has this
effect not only from its being less nou=
=rishing, but from the diminution of
appetite which the same food taken
for a long time, necessarily creates.

It ~~was formerly~~ is a practice to ~~take~~ and to use diet
bleed ~~and~~ to take purging physic in the
drinks ~~in~~ to prevent the diseases of that
spring in some countries & the simple
season.
and temperate diet which has been recom=
=mended will render them all wholly un=
=necessary ~~for~~ that purpose.

In Summer the heat of the sun disposes to
fevers and bowel complaints by its action upon
the solids and fluids of the body. Life is now
in excess ~~f~~. The diet proper to lessen it, &
distending to the stomach
to obviate its diseases should be, cordial to the
bowels, & nourishing in a small degree, ~~to the~~ these
should be broths
~~the fruits of the season~~, ~~broths~~ rendered gently
stimulating by condiments, salted meat, ~~fr~~

V The effects of heat upon ~~their flesh~~ it more especially when the Animals that af=ford it ~~they~~ are recently exercised; ~~[illegible]~~ often renders ~~them~~ it ~~unfit~~ the ~~causes~~ unsuspected Cause of Diarrhoea, Colics and dysentery.

fresh & salted fish, salads and all the fruits of the season. Fresh meat should be taken sparingly, if at all. It would be a good practice for our farmers to reverse the times in which they consume their fresh and salted provisions. ~~They would escape many of the diseases of the summer by~~ By eating their fresh meat in Winter at which time it might be kept for weeks without salt, and their salted meat in summer, they would probably escape many of the diseases of that season par-ticularly the Dysentery which prevails more in Country places than in cities chiefly from farmers living ~~wholly~~ habitually less ~~upon~~ upon salted meat than in other ~~season~~ parts of the year. The drinks during the summer should be Cyder - porter and Ale diluted

with water ~~or~~ at meals; ~~and~~ ~~without~~ but if any liquids should be required in the intervals of meals, none of them should be tasted. Water, or milk ~~or~~ and water, or molasses and water ~~should~~ alone should be resorted to to allay the thirst. All Other drinks increase it. —

The aliments ~~and~~ in the Autumn should be the same as in Summer. ~~From~~ In addi-tion to the morbid effects of the summer heat upon animals, they are sometimes rendered unhealthy by feeding in pastures in which they inhale a large quantity of putrid exhalations, for which reason less ~~of their flesh~~ fresh meat ~~they~~ should be eaten ~~with more [illegible]~~ ~~with more~~ ~~with [illegible]~~ ~~caution~~ than in Summer. The Quantity of ~~distilled~~ fermented liquors may now be ~~increased, or~~ taken in a less diluted state ~~as~~ with food, more especially if ~~autumn~~ the ~~common~~ mild Autum-nal

fevers of our Country should be epidemic.
- If the autumnal fever should rise to the
grade of yellow fever, fresh meat should not
be tasted, and ~~distilled~~ fermented liquors should be
taken ~~with~~ in small quantities, or not
at all, according to circumstances. ~~In the~~
~~these two~~ The former diet elevates the
system above, the latter ~~it~~ reduces it below
~~those~~ the points of excitement at which
the exhalations ~~which of~~ that produce those opposite
grades of ~~bi~~ autumnal fever, usually
produce their morbid effects. —

The ~~[illegible]~~ cold and gloom of winter
like the ~~hand of [illegible]~~ depression of old
age, call for more generous aliments
and drinks than any of the seasons
that preceded it. ~~At It is at this~~
~~time that convivial pleasures are~~

~~most safe and agreeable~~. The Surloin
of beef, the sparkling ale, and the ~~bumper~~ full
glass of wine when opposed to the debility
induced upon the system by cold, and the
subsequent exercises to which it disposes,
seldom ~~do any harm~~ under the convivial ~~table~~ unfriendly to ~~injurious~~ health
~~or shorten~~ or life. ~~It is to~~ ~~when its they~~
~~are taken in moderation. In the midst of~~
It is only when its pleasures are enjoyed
in excess, that they are hurtful. It would
be well if a person ~~who~~ were employed
~~to stand in at the end of~~ as a spectator
in all large ~~eating~~ dining companies, whose
~~business~~ office should resemble ~~it should be~~ that of the monitor of the
Roman Emperor, and who when he saw any
person eat or drink more than ~~the~~ was
proper for him, ~~to~~ should whisper in his ear ~~call out to him in~~
~~the language addressed to the Roman~~
~~emperor~~ "Remember ~~thou art mortal~~ there is sickness in that
plate, and death in that bottle".

The transition is a Natural One, from mentioning the ~~of~~ bad effects of excess in ~~upon health & life~~ eating and drinking, ~~to take notice the effects of a penury of aliment and drinks upon health and life, and~~ to point out the means of obviating the effects of a penury of aliments & drinks upon health and life, an evil to which the Citizens of ~~our~~ the United States are sometimes exposed not only ~~from~~ in Sea Voyages in common with other Nations, but from hunting, and travelling in new and unsettled Countries.

~~1 Tying a belt tight round the belly. The Indians use this remedy against hunger. The ~~Copt~~ belt used by the Copts in Egypt as a part of dress, probably serves the~~

1. V Drinking water. ~~or exposing the body to the external Air at night so as to imbibe the dew when water cannot be obtained.~~ Redi found by many expe-riments that animals that drank water lived much longer under equal Circumstances than those that did not. Exposing the body to the external Air at night so as to enable it to imbibe the dew, where water cannot be had, has been found to preserve and prolong life where there has been a total want of food.

The means for this purpose which have
been suggested by accident, or reasoning, and
~~those purposes~~
~~&~~ ~~sanctioned~~ by experience are ∨ :

2 The Use of certain calcarious substances
particularly the powder of calcined Oyster
shells. They act by blunting the Acid which
~~by~~ in the stomach ~~from its~~ from the diseased ~~state~~
action induced in it by hunger. ~~Saw dust~~

3 Saw dust, more especially that which
is ~~made under~~ obtained from the hickory,
the cedar, and sugar maple trees. Dr. Franklin
was once threatened with ruin by a
~~a~~ man of great influence in Philada:
whom he had undesignedly offended by a paragraph ~~publication~~
in one of his newspapers. The Doctor
invited a few of his friends to dine
with him the next day. His dinner
consisted of some weak mutton broth,
and a pudding. After dinner he asked
his Guests how they liked his pudding?

∨ A brother of the Doctor, who was a sea captain kept a cargo of horses alive for three weeks by feeding them upon nothing but the fine chips of cedar moistened in water, & afterwards sprinkled with a little flour.

4 Opium ~~or~~ in substance, or liquid Laudanum. The Turks ~~also~~ obviate the pain ~~and fatigue of~~ of hunger, as well as fatigue of body by small doses of this medicine taken in succession of this medicine.

~~* The Russian peasants obviate hunger by eating half baked bread, and the Irish peasants do the same thing by eating half boiled potatoes~~

~~they~~ all said very well. He then
told them it was prepared from saw
dust with a few spoonsful of ~~small quantity of~~ flour,
~~and~~ that the whole dinner he had given ~~their whole dinner had~~
~~there had cost him~~ but sixpence — and that
~~to be cost them but~~ his reason for giving
them so frugal a ~~meal~~ meal ~~was to~~ he said
~~show the he h~~ was, to determine a ~~a ques~~ ~~mentio-~~
simple Question, and that was ~~-sing the name of the Gentleman he~~
~~had offended had threatened to ruin him~~,
and ~~that he was asked~~ whether they
thought it were possible to ~~the~~ ruin a
man that could not only dine himself,
but entertain his friends ~~upon~~ for
the trifling sum he had mentioned.

V
5 The use of Tobacco. ~~It is~~ This weed so
useless or hurtful when habitually used,
has in many instances obviated the

V remedies for hunger will be admitted
by recollecting that animal life is sup-
=ported by substances taken into the
stomach which act only by their
stimulus, or weight, without con-
=taining a ~~particul~~ particle of nourish-
=ing matter in them.

pain and danger of hunger. It acts by creating a discharge of saliva into the stomach, ~~blunting the sensation of hunger~~

~~which~~ also by blunting the sensation of hunger. The ~~use~~ efficacy of the ~~two~~ three last

~~6 The matter discharged in sweats. They contain a portion of dissolved ~~fat~~ fat, and of course a ~~~~ small quantity of nourishing matter. Mr Hollowell and several of his fellow sufferers in the black hole of Calcutta were kept alive by feeding upon their own, and each other discharges from the skin.~~

6 ~~7~~ The smell of certain acrid or pungent substances. There is an account ~~of~~ in the German Ephemerides of a woman who was kept alive nine days by constantly smelling the Oil of Amber.

~~7 Bathing the body in salt or fresh water. It lessens the pains of hunger~~

v 7 ~~8~~. Tying a belt round the ~~body~~ belly. The Indians use this remedy against hunger. The belt used by the Copts in Egypt as a part of dress, probably serves the same purpose.

~~by its action upon the skin, and some of the water is probably inhaled by the lungs.~~ —

When persons are about to be exposed to situations in which it is possible they may suffer from the want of food, ~~customary provisions~~, they should carry with them a small quantity of those substances that contain the greatest portion ~~quantity~~ of nourishing and ~~stimulating~~ matter, in the smallest compass. These are Sugar, Oil, Spirit and Liquid Laudanum.

The means of obviating thirst where fresh water, and other liquids cannot be obtained are

1 Chewing tobacco. It abated both hunger and thirst in ~~Mr Davis one of the passe~~ a gentleman who ~~were escaped~~ was taken off the Rose in bloom which overset in her passage from Charleston to New York in Septem^r 1806.

2 Chewing lead. this excites a copious discharge of saliva into the mouth which abates thirst. It had that effect upon two other of the gentlemen who survived the melancholy Catastrophe of the Rose in Bloom.

3 Mr Hollowell and several of his fellow sufferers in the black hole at Calcutta in the East Indies, were kept alive by sucking their own and each other's linen wetted

It would give me pleasure to proceed in pointing out the means of preserving health as far they are connected with the structure and materials of our houses, with air - dress, exercise & the ~~or~~ employ=ment of the intellectual faculties, but these would encroach too much upon the more important parts of our course. I shall however glance at them in our pathology.

~~I~~ I shall dismiss the subjects of our ~~attention~~ four last lectures, by remar=king that Lord Bacon says ~~commends~~ that ~~kind of~~ all Science should be ~~most usefull is~~ brot Down to the business and bosoms of mankind. ~~I have endeavoured to~~

~~If I have failed in ~~fo~~ acting up to~~
~~the rule of this illustrious philosopher~~
~~in bringing the ~~[illegible] science~~ subjects of~~
~~the ~~four~~ four last lectures I have delivered down~~
~~to the business and bosoms, of any class I hope I~~
~~extend it at least to ~~the~~~~

I have aimed to ~~do in the four lectures~~
~~which I have last delivered, and now~~
I have aimed to bring down the science
of health ~~which has composed our four last lectures~~
not only to your ~~the~~ business & bosoms, but
to your ~~the~~ appetites – stomachs and constitu-
-tions, as well as to those persons who
shall hereafter become the subjects of
your ~~other~~ care in the practice of medicine.

87

with the profuse sweats which were discharged from their bodies under their agony, of from thirst and ~~be~~ the inhalation of bad air. —

4 Bathing the body in salt water. It: lessens the pains of thirst by its action upon the skin & ~~and~~ some of the vapor of the water ~~is a fresh fluid~~ (which is always fresh) is probably inhaled by the lungs. not absorbed by pores. Skin

a Coat of mail.

88

~~The means which are intended to p~~

To protect ~~us~~ from the injuries of an open sky, and inclement weather, houses have been the habitations of man in his civilized state ~~man~~ in all ages & countries. ~~But~~ to render them subservient for the purposes for which they were intended, ~~that is the preservation of health & life,~~ it will be proper to make a few remarks upon their situation, materials, and ~~their~~ ~~a healthy~~ form, ~~this so as for an agreeable temperature of air,~~ also ~~and~~ upon the means of keeping them cool, warm & clean, and of defending them from ~~those~~ accidents ~~to~~ which they are exposed, and which endanger health & life.

✓ South front 1/3 lip. fuel.

The situation of a house, or of a
Collection of houses, should command
the utmost attention. The old Romans
made it a practice to examine the livers
of the animals that fed in the neighbour-
-hood of ~~the~~ places upon which they con-
-templated to build their houses, before they
purchased them. If these livers were
sound, it was considered as a sign that
the country around was free from putrid
exhalations, for these affect the liver of
dumb animals in common with the
same part ~~of~~ in the human species.
modern observations has confirmed the
propriety of this ~~Roman~~ practice in the United States,
for it has been found in many instances

that inflammation, Schirrus, or Ulcers in the livers ~~are common in the fall in~~ of Domestic Animals accompa=ny ~~the prevalence in~~ bilious fevers in the Summer & Autumnal months in the human spe=cies.

Where this mark of a healthy situation ~~fouls~~ is not resorted to, a house should always be sheltered as much as possible from marshy, and low grounds ~~and~~ mill dams - ~~or stagnant~~ feeble streams of water, by means of hills or a Copse of wood reserved from the forest trees, or planted for that purpose. A situation near a Creek or river is safe, only where the water flows along ~~over~~ a gravelly or sandy shore. —

Houses in the United States are usually built of logs recently cut from the woods - ~~hew~~ logs with the bark hewed off them - boards - stones and brick. —

1 ~~Log~~ houses built of logs with the bark upon them soon decay from the moisture that is confined between the bark and the log. This decay or putre=
=faction of the wood is accompanied with an unpleasant ~~smell~~ odor, ~~and frequently~~ But this is not all. The vapor ~~emitted from~~ which from this odor ~~has~~ is of an unwhol=
=some nature. It rendered a whole regiment of american soldiers sickly that were confined in huts made of ~~new~~ logs the second year after they were erected, in the year 1792 upon the

They should ~~now~~ therefore be avoided as the habitations of men.

2 Hewed logs are more safe, - from the more easy escape of moisture from them in consequence of the bark being taken from them.

3 Houses ~~are~~ built of boards thoroughly seasoned are generally healthy. ~~Which they continue to be found~~ when the boards decay, they emit an exhalation which has been known to produce remitting and intermitting fevers. This decay may be prevented for many years by being painted, provided it be not done ~~After~~ Until they are thoroughly dry. ~~If this~~ Unless this be ~~be not~~ attended to, the painting, by

V They are rendered ~~warmer~~ cooler in Summer &
warmer in Winter by filling the Space
between the inside and outside boards with
~~Sand, or~~ Shavings or Sand. — This ~~[illegible]~~ loss
destroyed by water soaking — how

VI This is the case in a more especial man-
-ner with Stone for some time after it is
taken out of the ground, for the vegetable
and mineral matters which adhere to it
undergo such changes from the action of
Air upon them as to emit an unhealthy
Vapor. This Source of disease was so univer-
-sally admitted in Ancient Rome that a
house was never inhabited by her wealthy
Citizens until after it had been built one
year.

~~VI It is customary in some places to~~

confining the moisture within the

boards, accelerates their decay. ^

4 ~~Brick~~ Stone and brick compose ~~the~~ healthy and

~~most~~ durable houses, ~~and when~~ they

are dryer before, than after they are

plastered from ~~the base~~ their absorbing

the moisture that settles upon them.

But they are not the more healthy

upon this account, ~~for on~~ for matters

capable of putrefaction lodge in their

interstices, and thus infect the air of

the house. ^ It is by preventing ~~the~~ exhalation of this vapor

probably, that plaster and frequent white washing

~~have~~ found been in all Countries to ~~prevent~~ assist

~~[illegible]~~ in protecting ~~render~~ houses ~~healthy~~ from those

~~fevers~~ diseases which are generated by Domestic

~~causes~~ filth.

90 A house should always when it is practicable, be placed upon an elevated piece of ground. ~~The~~ ~~the doors~~ front ~~parts of the house~~ should be exposed to the South in the United States. This position renders a house cooler in Summer and warmer ~~than the~~ in Winter from ~~the~~ any other exposure.

In the ~~the windows should be as far as po~~ country ~~houses~~ where there is plenty of room ~~an advantage will arise~~ ~~from having houses should be built with~~ they houses should be built without Cellers. ~~and out~~ They generate foul air ~~which~~ from a Variety of sources. ~~and they render a house cold in Winter.~~ the usual Contents of ~~the~~ Cellers should be kept in a Cave dug for the purpose, with a small opening to communicate with the external air in the neighbourhood of the house. ~~The~~ Where this practice ~~rule~~ is not followed, ~~the Cellar~~ there should be no Communication with the ~~any~~ Celler except through the medium of an external Celler door, or there should be a Chimney in the Celler. ~~The advantages of~~ from the

~~a Chimney are it~~ constant renewal of the
air by means of a Chimney, provisions are
less apt to become mouldy than where this
is not the case, and the Cellar is rendered a
less ~~common~~ frequent cause of Disease. In Cities this
practice should be universal.

Large Rooms with high ceilings are cooler in ~~rooms~~ hot weather than
small ones. ~~High Rooms~~ ~~the~~ In the Dome of St
Pauls' Church ~~in London is a~~ the mercury is
always 8 degrees lower in ~~hot weather~~ summer
than in any of the common dwelling houses
in ~~London~~ London. In the Bank of Pennsylvania it
descends degrees in the same season, below
~~any~~ its standard in every other part of the
city of Philadelphia.

The windows of a house should open
in a direction opposite to each other. They
will be cooler in summer & warmer in
winter, when they descend to the level of the

√ Ground floors have been found to be more healthy than those of wood. They act by absorbing filth and heat. The ~~hea~~ comparative healthiness of the Chinese in their crowded cities, and of the Indians in their filthy wigwams, depends in part upon their eating - sleeping - and living upon ground floors. Count Saxe first suggested the ~~greater healthiness~~ advantages of ~~ground floors~~ earthen above wooden floors for military hospitals. They were adopted with great success by the american Army during the revolutionary war. They ~~may~~ should be used in kitchens in warm weather, at which time they are most necessary & calculated to be most useful.

floor. ~~They~~ Both Sashes ~~should be made to rise and fall~~ the fewer windows there are in a house, com-patible with a sufficiency of light, the better. ~~They houses are thereby rendered cool in summer~~ the heat of the ~~[illegible]~~ air is thereby lessened in Summer, and its Cold~~ness~~ in Winter.

To prevent disease, after a house is finished it should not be inhabited too soon after it is plastered.

After a house is occupied ~~disease~~ diseases sometimes originate from the following unsus-pected Sources.

1 the putrefaction of wood put up for fuel in a green State in a Cellar. An instance of a ~~annual~~ remitting fever occurred annually from this Cause in Philadelphia many years ago. It was prevented by ~~[illegible]~~ laying in dry wood for fuel, ~~afterwards~~ as soon as the

3 V The water used by a family ~~is some=~~ is sometimes
~~=times of an unwholesome quality from~~ impregnated
~~a~~ naturally or accidentally ~~impregnation~~
with some mineral Substances. A
large family suffered ~~for~~ for many
years in Worcester the late Dr. Wall
tells us from paralytic & bowel Com=
=plaints. After the death of eight of
them it was discovered that their
sickness and mortality arose from
drinking water from a pump in
which the bucket ~~was~~ played in a
leaden Cylinder, ~~which was exactly~~ and which exhibited
marks that the water had acted upon
it. see also from Dalzell ~~[illegible]~~ 5 path. on water.

4 Air which has long been confined in
a ~~room~~ house. ~~The~~ Its hurtful effects
may be prevented by opening and air=
=ing it before it is ~~upon~~ occupied.
~~Cabinets are often a~~ The same

by the attending physician
cause of the fever was pointed out ~~to the~~

~~family~~ of the family.

2 ~~Stagnating~~ water from rain or other sources stagnating in a Celler. ~~Many~~ families have sickned, and some of its members have died from this cause. It may be obviated when it arises from rain ~~by~~ or from subterraneous Springs ~~by~~ above the floor of the Celler, by cutting a Canal round the house, and covering it with boards and earth, or ~~thro~~ building an arch over it. If it arise from a Spring in the Celler it may be removed by digging a well in it. The water, ~~will drain but~~ if not abundant, will soon concentrate itself in this well in while ~~it is~~ ~~in~~ offensive, it may be if it should not be made so by covering it with boards, or erecting an arch of brick or stone over it.

V

precaution should be used ~~every~~ ~~Saturday~~ with Churches ~~that have~~ the day before they are appropriated to public worship especially in warm weather.

~~Often~~ As many diseases arise from
the excess of coldness, warmth & want of
Cleanliness in houses. it will be proper
to mention the means of preventing
them from each of those Causes.

1 There have been many disputes con=
=cerning the effects of cold upon the
human body in producing ~~as the Cause of~~ diseases.
The controversy may be settled in a few
words by remarking that where the
Action of the Cold is uniform upon the
human body it is not in a certain
degree unfriendly to health & life. The Indians
do not suffer from it only because they
~~do~~ are constantly exposed to it. Sir John
Sinclair mentions the history of a Dr.

Lyne ~~an~~ Physician in Ireland who ~~enjoyed~~ lived in
uninterrupted good health until he was
85 years old in a house in which the doors
and windows were constantly open. He
used to say "~~no~~ a house ~~was~~ could not be healthy,
unless a dog could get under the door, & a
bird get in at a window." A Citizen of
~~Philadelphia once~~ told his guests ~~of [illegible]~~ who
~~the Author of this work~~ complained of
~~[illegible] once, that while~~
the coldness of his dining room, that it
gave him a great advantage over his
fellow citizens, for as there was no dif=
=ference between the temperature of his
room, and ~~in~~ that of the air in the street, he never caught
cold by changing his atmosphere. Good
health upon the terms that have been
mentioned is purchased at a high and
precarious price. It requires perpetual
vigilance and constant strife to ~~guard~~ protect

the body against being impaired by a warm room, ~~and admitting this~~ ~~habit~~ It secludes from all society not disposed to acquire a similar ~~degree~~ habit of insensibility to Cold, and admitting this habit to be acquired, it places a man upon a footing with the farmer's ~~horse~~ horse ~~that~~ had been taught ~~to live wi~~ by his master to live without eating. The experiment succeeded, but the horse died immediately afterwards.

It is more agreeable to nature, & to the customs of civilized life, to ~~and it is~~ ~~certainly more pleasureable~~, to live above the painful [disagreeable degrees of Cold ~~, at home~~ in our houses, and b it certainly contributes to health and longevity to subject the body to the alternate action of heat & cold.

more especially when its extremes are limited by the ordinary heat of the houses, and the ordinary cold of the ~~ordinary~~ winters of the United States. Dr. ~~Hillary~~ Huxham ascribes the healthiness of the climate of Great Britain to its variableness which destroys the dangerous ~~colon~~ uniformity in the sensibility and actions of the ~~hu~~ human body. ~~I conclude~~ there should be no medium between ~~un~~ a pleasant warmth in our houses, and excessive cold. All half way ~~hysteric~~ practices upon this subject, are ~~more~~ more ~~danger~~ unfriendly to health than either of them. I proceed therefore to mention the means of ~~the~~ promoting warmth in our houses. These are

~~1 making the doors ~~close~~ and windows close by means of listing and removing the doors of closets at a distance from the fire place. —~~

On warm & cold Bath

see p 215 of Commonplace
book

on all the predispositions
sum up all in ~~them~~ one head

See diseases from diet &c in No 4.5. of
Pathology - of Cloathing in No 6.
Bring in + Salzmann calls "disease of
education". see No 6 on undue exercises of
mind. Under disease of education include
1 disproportionate studies 2 sedentary & hot & close
rooms. 3 from Vice cont^d warm privies &
beds. Bring in on Old age from Path^y No 9
396.
on Governm^t mind - see Path^y No 7.
See fact from Dr Cutbush on preventing
effects of cold by Oils &c to parts exposed.
baths of feet in cold water by Mr Jefferson
thro Mr Paisson. Ryebread - biscuit &c
half done bread used in Russia
because slow of digestion.

1. By means of fires. ~~they should~~ These are either open, or close confined in stoves. ~~[illegible]~~ Open fires placed upon hearths with ~~in~~ Chimneys contracted in the manner directed by Count Rumford throw out a great deal of heat. ~~and [illegible]~~ the heat is increased by suffering the ashes to accummulate in the fire place to such a degree as to prevent the wood coming in contact with it. In a room thus warmed, the venerable Dr Franklin passed the last winters of his life in Philadelphia. The heat is diffused more extensively through a room, ~~and is warm~~ when the ~~wood~~ fuel is placed in ~~an~~ open stoves such as bear the names of their inventors

V They are particularly useful in all large rooms in which entertainments are given in Winter. The sufferings from the Cold at ~~the foot~~ a part of a table ~~remo=~~ ~~=ved to a~~ distance from ~~the~~ an open fire place, are often very acute, and sometimes followed by fevers. ~~The best of~~ ~~to which the~~

In order to obtain the greatest benefit from ~~their heat~~ ~~must~~ close Stoves should be communi=cated by means of pipes to all the bed chambers of a house. ~~in order to obtain~~ The head, which is uncovered ~~is exposed~~ in bed, is ~~defended from~~ by this ~~the greatest benefit from them. The~~ means defended from the cold, ~~and bed~~ ~~body by this means retains its uniform~~ ~~temperature, and by~~ ~~Ear ache~~ and toothachs and catarrhs are thus prevented.

Bed rooms are warmed in this manner in Canada, and in several of the northern Countries of Europe. They have been found to be peculiarly agreeable to old people, and are calculated to prevent those sudden deaths to which they are expo=sed during the night in extremely cold weather.

Franklin and Rittenhouse.

Close Stoves have many Advantages over open fires. They diffuse the heat more equably, ~~and~~ by which means it is applied to every part of the body. They save a great deal of labor ~~in and expense~~ in the country to ~~in fuel~~ man and beast, in cutting and hauling wood, and a great deal of expense in cities in purchasing it. They save ~~time to~~ all that time to domestic industry which is lost in ~~waiting till a room is fed~~ supplying an open fire with wood, and in ~~or~~ running ~~[illegible]~~ every hour or two from a remote part of a room to warm the ~~f~~ hands and feet. It is to be regretted that the heat of a Close Stove ~~thus obtained, is disagreeable to many people~~ produces head ach, languor, and sickness in many people. They have ~~[illegible]~~ all been prevented in many instances

8 In deriving warmth whether from an ~~fa~~ open fire, or a stove great should be taken to avoid constantly ~~stopping~~ exposing the same ~~part~~ side of the body to it. ~~It will be~~ one side by this means becomes more stimulated than the other, and a foundation is thus laid for several diseases.

4 ~~VI~~ The under part of the floors of those rooms which are immediately above the Cellar, should be lathed and plastered; ~~much loss~~ as the warmth of those rooms is thereby ~~very much~~ considerably increased. ~~It~~ will be ~~encreased~~ still more by filling the space between the floor and the lathing with shavings, sawdust ashes or sand. —

by placing a bowl of water upon the stove. The evaporation of this water tem=pers the heat, and communicates something to the air which obviates its unpleasant and offensive qualities.

2 The fuel for fires in the United States is wood and Coal. The vivid flame of hiccory wood has been known to pro=duce inflammation of the eyes. The vapor emitted by Coal has been found to ~~in~~=crease a cough ~~=jurious to the lungs~~. They should both be avoided by persons subject to those diseases.

3 The heat of a room in what ever way it is produced is confined in some Countries by double doors and windows. In the United States what is called listing, or nailing the of Cloath to the sides of the doors and windows is resorted to for that purpose. —

4 ~~1st that lower part of a floor~~ part of the floors of those rooms which ~~is~~ are immediately above the ~~cellar~~ should be lathed & plastered. A

The excessive heat of a house in summer should be moderated by the following means.

1 In the Country by piazzas and trees

2 In cities by ~~shutter~~ closing not only the ~~the doors and~~ windows but the ~~and~~ window shutters of ~~the house~~ ~~during the day~~ of all those rooms which are not occupied in the day time. A room thus defended from the sun is degrees cooler than a room that is exposed to it. The windows should be opened after night ~~when they are~~ to admit cool and fresh Air.

3 By keeping the fire places and chimneys open. ~~By this means a constant circu -lation of Air is kept up in a setting room and a bed chamber, for~~ the Air in ~~being warmer above and below~~ the chimney ~~than the Air that is in it descends by its weight in the~~

v It is in consequence of this, that the coolest seat in a room is near to a Chimney ~~in~~ in hot weather.

Dkess, method of cooling a room.

~~the day time during~~ the day, ~~and being~~
~~The heat of summer when excessive is~~
~~less ... cooler than the air~~
being <u>cooler</u> than the external air above it, or
the air in the house, descends during
the day, and being <u>warmer</u> in the
night than the air ~~in the~~ above, & ~~below it~~ in the house, it ascends during
the night, and thus a perpetual and
cooling circulation of air is kept up
in a sitting room and a bed chamber.

3 Heat is less ~~...~~ felt upon the
lower floor of a house than in its
upper stories from the contiguity of
the earth ~~abstracting~~ favouring its
abstraction.

Cleanliness is essential to health in every house. ~~The~~ It should extend to the sinks where ~~the~~ a cellar kitchen has made them necessary. They are rendered inoffensive by means of what are called in London Stink traps - that is, by ~~two~~ a small well communicating with a deep one by means of a grate which ~~intercepts every~~ permits no=thing but water to pass through it, and which penetrates into the earth. The matters retained by the grate, are easily taken away by the hand once or twice a week. Where this contrivance is not used, sinks should be cleaned ~~once every month~~ as soon as they emit the least offensive odor. ~~But~~ From the neglect of this direction, ~~not only~~ servants, ~~but a whole family have~~ have often been infected with bilious fevers.

97.

2 The offals of the kitchen whether of vegetable or animal nature where a cow, or hogs are not ~~k~~ at hand to consume them, should be thrown into the fire. In destroying those matters in this way, we imitate the practice recom=
=mended by in the Levitical Law

3 It is common to throw the ~~l~~ body and bed linnen of a family into a basket, or to enclose it in a bag, where it is suffered to remain until it is taken out to be washed. This linnen is often impregnated with perspiration, & sometimes moist from sweat in Con=
=sequence of which it undergoes a Change

when deprived of Air which disposes it to produce ~~that~~ the same kind of fever which is generated in jails and prison ships from filth and confinement. Washer women have it is said been thus infected with that fever. The ~~source~~ cause of it should be obviated by exposing the linen to the Air ~~or keep~~ in an open room or Closet before it is sent to ~~the~~ be washed. —

3 Every ~~part~~ room & closet of a house as well as the Cellar and kitchen should be frequently ~~open~~ aired, and if necessary, cleaned. It would be a good practice if the Inspectors of Nuisances in our Cities ~~would~~ were permitted to imitate the ~~practice~~ conduct of Dean Swift who after entering the ~~parlour~~ Drawing room of a female friend with

98.1

whom he was invited to dine, refused to sit down. but suddenly walked up stairs, and examined every room and closet in her house. Upon returning into her ~~parlour~~ drawing room, he said! "I perceive madam, you are a good house wife. I give you no credit for the neatness and cleanness of this room in which you expected to see company, but I have found ~~all~~ every part of your house in the same neat ~~and~~ order."

4 Rats and mice by dying in the hollow places of walls emit ~~an offensive~~ a putrid odor which is dangerous to health. ~~They~~ ~~should be destroyed by traps, or poison~~ and ~~then~~

V ~~and~~ It was probably to prevent the extensive mischief they are capable of doing, that even the sight of them is ~~all~~ ~~so~~ generally ~~attended~~ with fear or hatred in all ranks of people.

98/2

There are ~~four~~ three ways of destroying them
1 by means of Cats. 2 by means of
traps. 3 by ~~putting so~~ mixing Arsenic
with such aliments as they are fond
of, and placing them in their way.
This method of destroying rats should never
be adopted. The poison intended for them
has sometimes been eaten by Children
and with fatal consequences. moreover
~~when~~ the rats when killed in this
way, putrefy in their holes, and thus
infect a whole house. ~~with~~ But they may
be driven out of a house
4 By ~~tying a~~ ~~catching a~~ ~~bell round the neck of one~~
~~of them and~~ fixing ~~such~~ a mark of
deformity upon a living rat and letting
him go afterwards. Shaving or burning the
hair off his skin has been found to ~~an~~
answer this purpose. All the rats of a
house ~~w~~ fly from him.

mosquitoes by their bites produce inflammation,
sores and fevers. ~~their bites flies annoy us~~
~~by their bites, and save they~~ Their generation
~~near a house~~ should be prevented by removing
all stagnating water from near a house.
This ~~a~~ annoyance may be obviated in a
certain degree by protecting those parts of the
body which are most liable to suffer from
them by means of coverings of leather, ~~as~~ in the
day time, and by what are called mosquitoe
curtains during the night.
Flies though seldom or never a cause of disease,
are sources of uneasiness ~~to~~ and vexation to most
people. They are destroyed by first alluring them to
a board ~~cov~~ covering with molasses and con-
=nected with the ceiling of a room or a piazza, and then
exploding gun powder under them. They may
be kept out of a bed room by keeping it shut up
in the day time, or they may be driven out of it
by means of a handkerchief or napkin after night.

The return of ~~others~~ [rats when thus destroyed, or driven away] should be prevented by repairing the injuries which time does to all houses. Whenever they appear, they are a call for the mason ~~and~~ [or] the Carpenter. ~~They are kindly sent to teach us Oeconomy and Cleanliness.~~ They may be considered as the first warning of the approaching waste of our property, & as the punishment of the want of clean=liness. ~~They are in the latter view, of them,~~ the bee of ~~our houses~~ and farms.

5 Bugs by ~~preventing sleep~~ [their poisonous bites & peculiar] ~~and by their~~ fœtor sometimes ~~diseases~~ [prevent sleep and thus] bring on diseases upon weak and irritable habits. They are like rats and mice the punishment of bad housekeeping. They are to be prevented by Cleanliness. The following

Diseases of the eyes are often contracted by means of smoke; and Colds are sometimes taken by sitting with our windows or doors partly open, to let it out of our houses. It is of consequence therefore to point out its causes, and its remedies. — Smoke ~~is~~ retained in a room instead of being carried off by a Chim=
=ney, ~~by the follow~~

1 by the room being too small ~~too~~ in proportion to the size of the fire place. This is only to be cured by contracting the fire place.

2 by the room being so ~~too~~ tight as to exclude the passage of all Air through the sides of the windows and door. This often occurs in new

V 3. By the door of the room being placed
so near the fire place as to ~~permit~~ ~~pour~~
pour ~~too great a quantity~~ of air upon
it ~~at once~~ faster than it can
be rarefied, by which means it drives
the smoke into the room. If it ~~to~~ cannot be
prevented ~~prevented by removing the door to a~~
~~greater distance from the fire place~~,
~~or~~ by causing the door to open from the
fire, the door should be removed to
a greater distance from it.

houses. and ~~ceases upon the shrinking of~~
~~the wood of which the doors & windows~~
~~are made~~. Smoke from this cause is
cured by a Ventilator, or a moveable
pane of glass in the upper part of the
room door. ~~But~~ It ceases of itself upon
the shrinking of the wood of which the
doors and windows of the room are made. V

4 By the large size of the funnel of the
Chimney immediately above the fire
place. ~~Count Rumford has this~~ Smoke from this cause is
~~was~~ prevented by contracting this
funnel agreeably to the plan advised
by Count Rumford, and adopted with
general success in many parts of the
United States. ~~The~~

5 By a want of proportion between
the width of a Chimney and its

height. In the lower story the funnels of chimneys ~~they~~ should be wider than in the upper stories of a house.

6 By the shortness of ~~the~~ funnel. ~~This~~ Smoke from this cause can only be remedied by lengthening the funnel, or lessening its width.

7 By the communication of two or more chimneys with each other. Smoke arises in this case from a deficiency of rarefied air to carry up all the smoke that is produced in the several fire places. ~~This~~ It is to be prevented by stopping up this communication, or by never making a fire in but one of the fire places at a time.

the tops of neighbouring houses,
8 By ~~the Chimney fa~~
or hills projecting above the top of a
Chimney, which enables the Wind
~~when it flows blows from a certain~~
~~Quarter~~ to drive the smoke backwards
into a room. ~~This~~ It is to be prevented
by raising the Chimney above the adja=
=cent houses or hills; ~~and~~ but if this
cannot be done by placing what is called
a ~~turn~~ cap upon the top of the Chimney,
~~that~~ is a cap covered above, and closed
on three of its sides, and ~~so~~ made ~~to~~ so as
to oppose those sides to the Wind that
occasions the smoke.

9 By the ~~Chim~~ funnel of the Chimney
being narrower above than it is below, or
by the irregularity of its course upwards.
~~this is a very frequent cause of smoke~~
~~from a Chim~~ ~~The cause~~ of smoke

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from this cause is obviously from the resistance which the ~~sid~~ converging sides of the Chimney give to the smoke, and ~~at~~ ~~in pro~~ ~~those places where~~ to the diminution of the ~~portion to the diminution of the action~~ action of the rarified Air upon it. ~~upon the~~ ~~acts with~~ ~~a diminished force upon it~~ the remedy for ~~from~~ smoke from this cause ~~to~~ is to lessen the resistance that is given to ~~to the smoke by~~ its upwards and passage out of the Chimney, by making ~~is to darling~~ the Chimney as wide above as it is below ~~or perhaps a little~~ It will more effectually ~~prevent~~ carry off the smoke if it made a little wider.

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4. To prevent fire descending from the roof, or ascending from the first story, form by means of blankets, a kind of dam on each of the intermediate stories, near their staircase, that shall confine the water that is thrown upon the roof, or into the windows. It will effectually check the progress of the fire downwards or upwards in brick and stone houses.

5. To prevent fire spreading to adjoining houses, cover them with wet blankets.

6. To extinguish fire in a chimney, shut the door and windows of the room. Throw a quart, or more of common salt into the fire. Hold, or nail a wet blanket before the fire place. If these means fail, throw a wet blanket down the chimney from the roof of the house. ✓

There is a method used in some countries of glaizing chimnies when they are built by burning common salt in them, which renders them so smooth, that no soot can adhere to them. Chimnies so constructed can never take fire.

Ladders are commonly used as the means of conveying persons from the windows of houses on fire. Would not a long and stiff pole, with a rope fixed at its upper end, be more portable, and convenient for this purpose?

✓ at the same time close all the fire places that communicate ~~with~~ by chimneys with the chimney on fire.

✱ 12 Protect your house ~~by~~ from fire, ~~by~~ ~~some~~ from lightning by means of ~~a rod~~ an electrical ~~rod~~ conductor. —

connected in

Mr. John Westley when a
en out of a window in his fa-
hilst it was in flames, by one
upon the shoulders of another.
may be used to rescue persons
story of a house on fire, where
cannot be had with sufficient
or expedition.

~~A WATCHMAN.~~

ure of Pennsylvania

Life ~~and or~~ is often endangered from fires, ~~these~~ and ~~health~~ health is ~~bitu~~ often is impaired by burses, bruises, and the terror con=nected with ~~fire~~ the destruction of a house by fire, where life is not de=stroyed. ~~He~~ To obviate these evils, ~~I shall~~ the following directions which were first pub=lished by the Author in Claypoole's American Daily Advertiser ~~then~~ on the 3d. of February 1797.

~~S~~udden death, or distressing diseases are sometimes brought on by means ~~by~~ of strokes of lightning. They are to be prevented when ~~out~~ in the open air, by avoiding the shelter of trees. In a house they are to be prevented by means of ~~an~~ electrical conduc=tor, but where this has not been conside=red as an essential part of a house, care should be taken during a thunder storm

Close all the fire places connected in one Chimney.

Philadelphia, February 3.

For the American Daily Advertiser.

DIRECTIONS

For preventing Calamities by

FIRE,

Recommended to all HOUSE-KEEPERS, *to be pasted up in their Kitchens, or other parts of their Houses.*

1. KEEP your Chimnies and Stove-pipes clean by sweeping them at least once every month.

2. Never remove hot ashes in a wooden bucket, or a wooden vessel of any kind, and look well to the ash hole.

3. After sweeping a hearth, see that the hearth brush does not retain any particles of fire, before you hang it up in its usual place.

4. Oblige all your servants to go to bed before you, every night, and inspect all your fire places, before you retire to rest.—For fear of accidents, let a bucket of water be left in your kitchen every night. The writer of these directions once saved his house from being consumed by fire, by this precaution.

5. Do not permit a servant to carry a candle to his bed room, if he sleeps in an unplastered garret.

6. Cover up your fire carefully every night in ashes. Let the unburnt parts of the billets, or chuncks of wood, be placed next to the hearth, by which means no sparks will be emitted from the wood. Pour a little water upon the burning ends of the wood which are not completely covered by the ashes. Place before the fire a fender made of sheet iron. This contrivance was well known in England many years ago, by the name of a *coverfeu*. It has lately received from a top being added to it, the name of a *hood*.

7. Remove papers and linen from near the fire when you leave it, to a remote part of the room.

8. Shut the doors of all the rooms in which you leave fire at night. By thus excluding the supply of fresh air, you will prevent a flame being kindled, should a coal or spark fall upon the floor, or upon any other combustible matter in the room. The smoke which issues from this smothered fire will find its way into every part of the house, and by waking the family, may save it from destruction.

9. If sickness, or any other cause should oblige you to leave a candle burning all night, place it in such a situation as to be out of the reach of rats. A house was once destroyed by a rat running away with a lighted candle for the sake of the tallow, and conveying it into a hole filled with rags, and other inflammable matters.

10. Never read in bed by candle light, especially if your bed be surrounded by curtains.

11. Strictly forbid the use of segars in your family at all times, but more especially after night. May not the greater frequency of fires in the United States than in former years, be ascribed in part to the more general use of segars by careless servants and children? There is good reason to believe a house was lately set on fire in Northumberland county, by a half consumed segar, which a negro woman suddenly threw away, to prevent her being detected by her master in the unhealthy and offensive practice of smoaking.

In case of fire, attend to the following directions, to prevent, or restrain its terrible consequences.

1. Do not open the room or closet door where

The famous Mr. John Westley when a child, was taken out of a window in his father house whilst it was in flames, by one man standing upon the shoulders of another. This practice may be used to rescue persons from the first story of a house on fire, where other means cannot be had with sufficient convenience or expedition.

~~A WATCHMAN.~~

Legislature of Pennsylvania

after night. May not the greater frequency of fires in the United States than in former years, be ascribed in part to the more general use of segars by careless servants and children? There is good reason to believe a house was ~~lately~~ set on fire in Northumberland county, by a half consumed segar, which a negro woman suddenly threw away, to prevent her being detected by her master in the unhealthy and offensive practice of smoaking.

In case of fire, attend to the following directions, to prevent, or restrain its terrible consequences.

1. Do not open the room or closet door where you suspect the fire to be, until you have secured your family, and your most valuable effects, nor until you have collected a quantity of water to throw upon the fire, the moment a fresh supply of air excites it into a flame. Where water cannot conveniently be had, try to smother the fire by throwing two or three blankets over it. A British sea captain once saved a king's ship by throwing himself with a spread blanket in his arms, upon a fire which had broken out near the powder room. He was pensioned for life, for this wise and meritorious act.

2. In case it be impossible to escape by a stair case from a house on fire, shut the door of your bed chamber, and wait until help can be brought to secure your escape from a window.

3. If safety does not appear probable in this way, wrap yourselves up in a blanket, hold your breath, and rush thro' the flames. If water be at hand, first wet the blanket.

4. To prevent fire descending from the roof, or ascending from the first story, form by means of blankets, a kind of dam on each of the intermediate stories, near their stair-case, that shall confine the water that is thrown upon the roof, or into the windows. It will effectually check the progress of the fire downwards or upwards in brick and stone houses.

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places connected in

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~~A WATCHMAN.~~

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FRIDAY, FEBRUARY 3,

DELPHIA:—Printed b DAVID C. and SEPTIMUS C

In Council, Annapolis January 5, 1797.

ORDERED, That the Reſolutions paſſed by the General Aſſembly at their laſt ſeſſion, reſpecting certificates and bills of credit, be publiſhed eight weeks ſucceſſively in one of the Philadelphia and Alexandria news papers, and in one of the Baltimore, Frederick Town and Eaſton papers, and the Maryland Gazette. By order,

NINIAN PINKNEY.

By the Houſe of Delegates. December 27, 1796.

1. RESOLVED, That the Treaſurer of the Weſtern Shore be, and he is hereby authoriſed to pay off and diſcharge the principal and intereſt due on all certificates heretofore iſſued by the ſtate of Maryland, other than thoſe diſtinguiſhed as fraudulent ones—Provided the ſame are brought into the Treaſury for payment on or before the firſt day of July, one thouſand ſeven hundred and ninety ſeven.

2. Reſolved, That all holders of certificates heretofore iſſued and funded by the ſtate of Maryland, bring the ſame to the Treaſury of the Weſtern Shore for payment of principal and intereſt, on or before the firſt day of July next, and that no intereſt on any certificates heretofore iſſued which ſhall accrue after the ſaid firſt day of July, one thouſand ſeven hundred and ninety ſeven, ſhall be paid thereafter, nor the principal ſum until after the end of the next ſeſſion of Aſſembly.

3. Reſolved, That ſuch part of the five months pay due to the officers and ſoldiers of the Maryland line, and due for ſervices on board the barges, as ſhall not be demanded of the Treaſurer of the Weſtern Shore, on or before the firſt day of July, one thouſand ſeven hundred and ninety ſeven be not paid to any perſon or perſons demanding any part of the ſame until after the end of the next ſeſſion of Aſſembly.

4. Reſolved, That the Treaſurer of the Weſtern Shore be and he is hereby authoriſed to pay off and diſcharge the amount of principal and intereſt of ſuch bills of credit of the emiſſion under the act of June ſeſſion, one thouſand ſeven hundred and eighty, as may be produced and brought into the Treaſury, on or before the firſt day of July next.

5. Reſolved, That if any of the holders of bills credit emitted in virtue of the act of June ſeſſion, one thouſand ſeven hundred and eighty, do not bring the ſame into the Treaſury of the Weſtern Shore for payment, on or before the firſt day of July, one thouſand ſeven hundred and ninety ſeven, that all intereſt from that time ceaſe thereon, and the principal not be paid until after the end of the next ſeſſion of Aſſembly.

6. Reſolved, That the above reſolutions be publiſhed for eight weeks ſucceſſively, in one of the Philadelphia and Alexandria news papers, and in one of the Baltimore, Frederick Town and Eaſton papers, & the Maryland Gazette, that the creditors of the ſtate may be notified that funds are prepared for the diſcharge of their claims.

By order,

Wm. HARWOOD, Clerk.

By the Senate, Dec 27th, 1796.

Read the firſt time, and ordered to lie on the table. By order,

A. VANHORN, Clerk.

By the Senate, Dec. 29th, 1796.

Read the ſecond time and aſſented to.

By order,

d8w A VANHORN, Clerk.

Now diſcharging at Penroſe's wharf, the next below Almond ſtreet, from the ſhip Arethuſa, a quantity of Porter and Wine BOTTLES, for ſale at the reduced prices of 4s. to 5s. per dozen, and on a liberal credit, according to the quantity purchaſed. For further particulars, apply to WILLIAM & SAMUEL KEITH.

No. 279, South Front ſtreet.

Alſo, for ſale, Fifty Ton of COALS.

Freſh Garden, Graſs and Flower

s Ame

F R

IDELPHIA:—Printed b

d8w By order,
A VANHORN, Clerk

Now discharging at Penrose's wharf, the next below Almond street, from the ship Arethusa, a quantity of Porter and Wine BOTTLES, for sale at the reduced prices of 4s. to 5s. per dozen, and on a liberal credit, according to the quantity purchased. For further particulars, apply to WILLIAM & SAMUEL KEITH.
No. 279, South Front street.
Also, for sale, Fifty Ton of COALS.

Fresh Garden, Grass and Flower Seeds, Roots, &c. &c.

This Day Landing from the ship Eagle, Captain Fosdick, from London, and for sale by
GOLDTHWAIT & MOORE,
Corner of Walnut and Second streets, a most capital and extensive assortment of
Garden, Grass and Flower Seeds, Roots, &c.
Among which are

Five kinds	Asparagus	Three kinds	Cresses
Four	Berecole	Twelve	Onions
Twenty five	Beans	Thirteen	Radish
Six	Beets	Fifteen	Turnip
Eleven	Brocoli	Fifteen	Peas
Twenty six	Cabbage	Six	Savoy
Six	Carret	Four	Parsnip
Three	Cauliflowers	Twenty three	Melon
Five	Celery	Twenty one	Lettuce
Ten	Cucumber		

Common and lemon Thyme
Curled leaf and sprigged Parsley
Pot Marygold Pot Marjorum
Balm Thyme Mangel Wurtzel
Leek Kail Shallots
Rape Seed Rye Grass Saint Foin Lucerne
Red and white Clover Timothy, &c. &c.
With a curious collection of the most esteemed
FLOWER SEEDS & ROOTS.

Being the most extensive assortment ever imported in this city. The above are from a capital Seedsman in London, and are warranted fresh and good. Printed catalogues may be had by applying as above. Dec 26 ¶

THE PARTNERSHIP BETWEEN
Israel Whelen and Joseph J. Miller,

TRADING under the firm of Whelen and Miller, was dissolved, by articles of agreement, on the 15th day of February last; but the said Joseph had a right, by the said articles, to use the name of the firm for a certain time, which has now expired, and of which this public notice is given.

All persons indebted to the said co-partnership will please to make payment to Joseph J. Miller, to enable him to adjust and discharge the debts due from the company.

ISRAEL WHELEN,
JOSEPH J. MILLER.
Philadelphia, December 20, 1796. †

THIRTY HOGSHEADS
4th proof Jamaica Spirits,
20 hhds. St. Croix Rum
40h hds. Sugars
A quantity roll Brimstone—For sale by
JOHN STEINMETZ, junr.
Jan. 10 2osp No. 69, north Water street.

House and Smith's COAL,
From England, now landing and for sale by
Dec 30 ISAAC PHIPPS,
¶ Corder on Almond street wharf.

to avoid sitting near a Chimney, or the walls of a house, ~~and broken~~ also standing near ~~the~~ an open door or window. The bed should be removed in the night, ~~to~~ During in a thunder storm to nearly the Centre of a room. ~~during the~~

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Our ~~Dress~~ Cloathing

The first use of Dress was to prevent a Sense of Shame to which the Loss of primeval in=nocence ~~and nakedness~~ exposed the parents of the human race. It serves the further purposes of defending the human body from those degrees of ~~heat~~ heat cold and ~~heat~~ moisture which excite pain and become otherways the cause of many diseases. see Lectures on pathi No 6.

~~The materials with which~~ Cloathing employed for ~~Cloathing~~ in the United States ~~are~~ is composed of ~~Wool~~ - ~~Linen~~ - ~~Cott~~ Silk furs & Cotton ~~Woollen~~ ~~and etc.~~

This part of our subject divides itself into the materials, and the form of Cloathing, ~~for the different Sexes, and~~ and afterwards into those kinds which are proper for the different Sexes, Seasons, & ages. ~~for the dif. Seasons & Seasons of the year~~.

The materials of which Cloathing is composed are wool, silk-furr-leather, & all ~~lin~~ ~~Cotton and Linen.~~ ~~the first three~~ of which ~~four~~ are obtained from Animal substances, ~~the two last are~~ and cotton and flax which are obtained from vegetables. The former have deci= =dedly been considered as affording the most healthy materials for Cloathing. ~~of~~ They ~~are less apt to ex~~ seldom generate dis= =ease by retaining the perspiration. This is one reason why the Chinese who so generally wear silk garments ~~till they~~ are less ~~of~~ subject to the fevers which arise from human miasmata under many of the other circumstances which produce them. ~~They~~ Some retain the heat of the body longer than ~~the heat of~~ Cloathing from vegetables, & when wet with ~~sweat or~~ rain they are ~~less~~ not disposed to check perspiration. It was remarked during the American revolutionary war

v the soldiers of ancient Rome. This
healthiness from this and ~~two~~ a
~~other~~ causes formerly mentioned
was such, that ~~not a single treatise~~
~~has descended to us upon the diseases~~
~~of the Roman Armies, and probably~~
~~because~~ no ~~specific~~ peculiar diseases ~~peculiar~~ existed
~~to~~ among them. This is inferred, from not
a single ~~dis~~ treatise upon camps
diseases ~~is to be~~ being met with among
all the numerous medical books
and tracts which have descended to us
from that nation.

that those officers and soldiers who wore
flannel ~~shirts~~ next to their skins
were rarely affected by Colds or fevers.
Woolen Garments alone were worn by ✓
Cotton partakes of some of the Qualities
of the Cloathing which is obtained from
animals.

Linen obtained from flax is the most
less disposed to produce disease of any the
articles of Cloathing that have been
mentioned. The perspiration when confined ~~raised~~
by it ~~so~~ for some time, acquires a
morbid quality. Even rain when suffe-
=red to stagnate upon it has been known
to change its qualities so as to render it
unhealthy. Those soldiers who ~~were~~ con=
=stantly wore a ~~an~~ loose over garment called a
Rifle=shirt made of linen, were the
first victims of the Camp fever which

√ Damp ~~bed~~ linnen next to the body, and damp Sheets should be carefully avoided. I know that this advice has been opposed by Dr Franklin upon the authority of Father Feyjoo who ~~enu-~~ ~~merates~~ includes the opinion of persons taking Cold from ~~wet Sheets - bodily linnen~~ the above causes, and from newly washed floors, ~~among~~ in the list of Vulgar errors. ~~The experience~~ ~~of thousands~~ However ~~innocent~~ harmless the practice may be, to Soldiers, Sailors and labourers, ~~it the experience of~~ there are few physicians in the United States who have not seen Rheumatisms, Colds, and pleurisies contracted by it.

destroyed several thousand of the ameri-
-can Army in the year 1776. I mentioned
formerly that it sometimes produced
disease when ~~the~~ confined for a week or
two in a cloaths bag or basket from
the ~~[illegible]~~ perspiration it retained
when taken off the body. ~~a~~ This unheal-
-thy quality in linnen was perhaps imposed upon it to compel
us to be cleanly, for it may be completely
obviated by changing it often, and exposing
it when ~~[illegible]~~ foul, to the action of the
air. ~~This I~~

The form of Cloathing should be
such as never to bind any part of the
body. The Cloaths of the ancient Romans
were loose and flowing. Many diseases
have arisen from tight ~~[illegible]~~ liga-
-tures about the neck ~~and~~ breast & waist,
~~[illegible]~~ and from tight shoes and boots.

The four seasons all require different kind of Clouthing. [I shall begin by men=tioning that ~~which is~~ proper in the winter, or ~~in~~ cold weather.]

Wool, furr and silk ~~are~~ should be preferred to protect the body from the cold of winter, and the quantity of them should be proportioned to the degrees of cold, and the sensibility of particular parts. I am aware that I oppose here a popular opinion that the whole body might be made to acquire by time & habit the same insensibility to ~~the~~ cold, that we observe to take place in the face. But I cannot admit this opinion. The nerves of the face possess a specific insensi=bility to cold which is seldom acquired by other parts of the body, and should we render ~~the nerves of~~ them all equally

insensible with the face to the action
of Cold in the Course of a winter, they
would lose this insensibility ~~in~~ the
succeeding Summer, and thus the work
of hardening the body would be doing &
undoing every year, ~~same~~ ~~this life~~ and never done.
But for what purpose do we wish to
create this general insensibility in the
body to Cold? ~~we do not~~ Do we wish to educate
our sons exclusively for the toils ~~of hunting or~~ war,
~~and~~ ~~were~~ to watch for the ~~game~~ animals upon which
they are to subsist, for two or three
days behind a bank of snow? ~~would~~ or do
~~life to~~ we wish to form our women
for the ~~dangerous~~ hardships & slavery of
Indian wives? – ~~The design of this work~~
~~is to~~ Admitting that we could succeed in
~~this~~ the experiment of inducing the

Indian Constitution upon ~~civilized~~ our
citizens, what should we gain by it?
The design of this work ~~Look at an Indian at~~ is to produce
in its readers the greatest degree of health
and longevity, but look at an Indian
of fifty years of age, and you will see
in his face the same marks of age which
you will observe in a ~~m~~ ~~civilized~~ man who has
passed seventy years in ~~a state~~ of civili-
-zed Society ~~-zation~~. Read the accounts that are given
~~of the~~ by travellers of the violence of ~~the~~
Diseases of the Indians, ~~of~~ the ~~frequent~~ occasional mortality of whole
tribes from them, & of the ~~frequent~~ rare
instances of ~~an~~ old age that occur among
them, compared ~~with those~~ under equal
circumstances with the ~~great~~ number ~~those~~ which occur
among civilized nations.

I proceed therefore to point out the means of perpetuating to man the blessings of that state ~~in which he was created~~ ~~and~~ in which the first families upon the earth existed, and in which there is ~~more~~ not only more health & ~~longer~~ life, ~~that~~ but more enjoyment than in ~~that~~ savage ~~state~~ and ~~degraded condition~~ ~~departure from it~~ ~~which civilization~~ miserable condition which has erroneously been supposed ~~to~~ to have been the original ~~state~~ state ~~condition~~ of man.

The following rules should be ob=-served in protecting the body from cold.

1 Flannel should be worn next to the skin. ~~The shirts of the Roman soldiers were made exclusively of the wool. The~~ I shall hereafter mention the only state of the body which requires an exception to this rule. Where flannel is forbidden, or disagreeable to the skin

~~the~~ Advice which Dr Boerhaave gave to a Gentleman to whom he recommen=ded warm cloathing, should be followed. It ~~consisted in a few words~~ was "Re=member two Shirts, are warmer than two great coats." The Climate in which Dr Boerhaave lived gave him the best opportunities of knowing the efficacy of this prescription.

2 The head should be protected in cold weather by a woolen night cap. ~~To this rule there is sometimes an exception. in~~ ~~Persons who are subject to inflammatory affections of the brain are defended~~ It is no objection to this rule than some persons have been cured of head ach, and other diseases of the brain by exposing their heads during the night to the Action of cold air. ~~[illegible]~~ The

Object of this work is to suggest the means of preserving health & life, and not to cure diseases.

3 The feet should be protected with woolen stockings - corked soaled shoes, or large and loose galoshes worn over the shoes or boots. These will be more necessary when the weather is wet as well as cold. The following application to the shoes and boots ~~known~~ first used by ~~by the seamen of~~ the fisherman in the reign of Queen Elizabeth of England has been found effectually to prevent their imbibing moisture. Rosin four parts Bees wax six parts mutton suet eight parts, and linseed oil sixteen parts melted together. Too much pains cannot be taken to keep the feet warm in cold & even cool weather, for by them

and ~~next to~~ the warmth nearly all chronic diseases enter the human body.

4 Feather beds should be used ~~preferred to our-~~ ~~selves~~ in cold weather and ~~they~~ the wider- warmer de- and a covering of made of down should be preferred to a great number of bed cloathes. A ~~The weight~~ ~~of a~~ down covering ~~that~~ that weighs but three pounds will confine more heat than three blankets. It has moreover the additional advantage of not oppressing the breast by which means the lungs in every act of inspiration fill the whole chest. ~~In~~ a blanket placed between the lower sheet and the bed ~~under~~ adds considerably to its warmth. In extreme cold weather, it will be found more comfortable to sleep between blankets than sheets. The warming pan ~~should be~~ is seldom necessary to persons in good health. As sleep

V once engaged in extensive Country
practice informed me that he had
found the latter, taken just before
he mounted his horse to ride in
the cold to protect him from its
painful effects much more than
ardent Spirits.

is sometimes prevented in very cold weather
by cold feet, they should be ~~w~~ kept warm
during the night by being placed in contact
with a jug, or bottles filled with warm wa=
=ter. Under the bed cloathes they will re=
=tain their heat until morning. —

In going abroad in cold weather some
further means of ~~protecting~~ defending the body from
being injured by it have been found ne=
=cessary. These are
, Eating a hearty meal or drinking a pint
of strong Coffee. A physician who was ✓
a washing the feet in tepid or cool water,
and afterwards adding, to the Coverings
formerly mentioned, a large woolen
Socks or Stockings. ~~they~~ In riding in a
carriage, hay or straw may be substituted
for them. In riding upon horseback, the
feet will retain their heat a great while
by resting them upon Stirrups covered

with toe, or a Peice of Coarse woolen Clouth.

3 The hands should be covered with gloves or mittens made of woolen or furs. The latter by admitting the contact and motions of the fingers, retain the most heat.

4 The ears are more apt to be affected by cold than any other part of the head. They should be protected by means of a handkerchief or a furr cap.

5 The face should be defended by a mask.

6 The trunk of the body and the limbs should be defended by means of thick woolen clouths. Mr Acerbi ~~mentions~~ in speaking of the means employed in Sweden to guard the body from cold mentions an instance of a gentleman who left ten articles of Dress ~~at a~~ in the entry of a house to ~~which~~ in Stockholm to which he went to pass

V 8 ~~E~~ Dr Boerhaave mentions a liquor called
Brunswick mum which is ~~drunk~~ used by the Drovers
who bring Cattle from the north of Europe to
Holland in the middle of winter, in order to fortify themselves
against the Cold. They declared to the Doctor ‡

~~‡ 10 Idea~~ Chewing tobacco by persons
9 who have not been in the habit of
using it. I have heard of a life being
saved by this remedy. It not only
counteracted the cold, but induced
a general heat and perspiration
over the whole body.

11 11. ~~10~~ Wetting the body with salt water has
been found to lessen the ~~effects of the~~ ..
~~air~~ the painful effects of cold air, and cold
fresh water upon the body.

12 Pouring ardent spirits into the shoes or boots
preserves the warmth of the feet. ʘ

‡ that they found no liquor equal to it
in preserving the natural heat of their
bodies. It is nothing but strong Beer ~~in its~~
~~unfermented state~~ reduced by heat to the
consistence of a thin syrup. —

9. ~~A physician who did~~ A physician who
was once engaged in extensive Country
ʘ 13 The Indians obviate the first

an evening ~~on a~~ in winter. Six of them were two pairs of Gloves — two pairs of boots, and two great Coats. — Conversation, and Singing lessen the effects of cold upon the body.

7

10 ~~6~~ It is a good practice in travelling to avoid going near to fires ~~in~~ unless the cold be very intense. — when the hands or feet have suffered from it, ~~body be~~ ~~hands or body have suffered from the cold~~. ~~If the frozen~~, they should be washed in cold water before they are exposed to the fire. —

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~~13~~ Persons are sometimes exposed in travelling by land and water to intense degrees of cold in which they are incapable of using exercise, or any of the means that have been mentioned to lessen ~~it~~ it. ~~Two Gen~~ A brother of the late Governor Van Dyke informed me ~~from whom~~ ~~Thomas~~ ~~friend of mine~~ that he was obliged to cross ~~a branch~~ one of the rivers of the Chesapeak on a cold evening about forty years ago. ~~on~~ a little beyond the middle of the river, the ~~boat~~ ~~rivers~~ ice formed so rapidly, that the boat could not be moved. The ferryman gave up all

~~practice informed me that he had~~
~~found a pint of Strong Coffee taken~~
~~just before he mounted his horse to~~
~~ride in the Cold, to protect him from~~
~~its painful effects much more~~
~~than Ardent Spirits.~~

painful sensations of Cold upon their
feet by plunging them in Cold water.
They sometimes break the ice for this
purpose. The cold water, aided by ~~[illegible]~~ the ~~excites one~~=
~~him~~ subsequent exercise of walking
~~[illegible]~~ produces reaction in the feet &
thus restores their warmth.

14 The least tendency or disposition
to Sleep should be resisted by running,
or jumping when it is practicable.
this sleep is the beginning of death.

~~reputations~~ of ~~our~~ life. Mr. Van Dyke
~~[illegible]~~ bid him not despair, and
directed him to take off his shoes, while he at ~~at~~ the
same time ~~[illegible]~~ took off his boots. They
then sat down in the bottom of the boat
and placed ~~with~~ their feet ~~placed~~ against each other's
breasts. ~~and their heads and bodies so~~
~~completely co~~ afterwards they covered
their heads and bodies ~~so~~ completely with
Mr. Van Dyke's great Coat ~~that~~ by which
means they confined ~~all~~ so much of their perspiration
and breath as to become ~~so~~ comfortably
warm. They then fell asleep and remained in ~~that they slept soundly for~~
that state ~~for several hours~~
several hours. ~~In~~ In the morning the
river was ~~so~~ frozen so hard, that
the ferryman led Mr. Van Dyke's horse
upon it to the opposite shore. Several
persons were saved from perishing with

cold by the same practice ~~in the winter~~
~~of 1806~~ who were driven from ~~the houses~~ new york
into the open sea in the winter of 1806.

In the Spring, the cloathing should ~~gradually~~ be
lessened with great care. no part of the
interior covering of the body should be
laid aside, until the weather becomes
uniformly warm. ~~many fatal~~ Plurasies
have often been brought on by taking off
a flannel shirt on a casual hot day in
the month of April. The cloak, great coat ~~or~~
Surtout, or Spencer may be dispensed with
at midday but should be put on in
the mornings and evenings. The form
of the Chinese ~~cloathing~~ dresses favours the easy
diminution or encrease of ~~the cloathing~~ in cold weather. ~~their outer~~
much more than ours. they wear three coats ~~their long~~
~~outer~~ The outer ~~coat~~ one is shorter & lighter

than ~~this~~ the second, and the second
shorter and lighter than third by which
means they change their Cloaths so as
suit the Changes in the weather without
so great diminution of their Cloathing as
arises from laying aside a great coat,
or without the trouble that attends
~~to~~ taking off, and putting on the ~~internal~~ interior
and small coverings of the body.

~~In wet weather whether it occur in~~
~~the town~~ In Summer it is common to
wear Cloaths made wholly of silk Cotton, and ~~silk~~
linnen. But experience has taught that
thin ~~Cloaths~~ a woolens are to be prefered to
them, especially for outer Garments. Even
the sweats they induce tend to prevent the
diseases of Summer. Great Care should be
By ~~to~~ persons to whom flannel is disagreeable=
=worn next to the skin, cotton ~~may~~ be used in its stead.

✓ It ~~ex~~ is practice Ulloa tells us among
the Spaniards in the Island of Cuba when
they are partially wetted by a shower of rain,
to plunge themselves into a stream of water so
as to wet their bodies all over to the skin. The
system is thus obliged to react, and the bad
~~X [illegible] machine &c~~
effects of the partially wetting prevented. Where
this is not done wet cloathes should ~~be~~
never be ~~per~~ suffered to dry upon the
body. The sooner they are changed for
dry cloathing, the better. Where this can=
=not be done, the reaction of the system
should be excited by ~~things~~ exercise warm tea, or
coffee - or fermented liquors, ~~th~~ by a small
quantity of ardent spirits. ~~this is one of the~~
~~So~~ General Wolfe ~~a~~ who was a philosopher as
~~as~~ a ~~soldier~~ warrior never allowed his soldiers
to taste ardent spirits except ~~upon the occasi=~~ when they were
exposed to rain. ~~in which case he found~~
~~them safe and useful~~. It is one of the
few occasions that occur in ~~the~~ which
they are safe and useful.

taken to ~~guard~~ increase ~~or change~~ the Cloathing in the mornings and evenings After the 20th of August, in the middle states, and at all other ~~seas~~ times when the coolness of the morning & night air greatly exceeds its temperature in the middle of the day. It will be im-prudent in most parts of the United States in the summer months to go abroad for even a few days without a change of woolen Cloaths, or a great Coat. The Spanish proverb relative to this rule is a wise One. "If it ~~rains~~ the sun ~~you~~ shines, take your great Coat with you, but if it rain, do as you please".

V ~~The body suffers least in~~

In ~~going abroad in hot weather~~ exposing the body to the rays of the sun the head should be protected by means of Umbrella & a high crowned ~~hats~~ and light hats. ~~They~~ The latter should be made

v whole bodies ~~by means~~ with of large and
loose great Coats or Cloaks when they
expose themselves to the rays of the
Sun. ~~by which means they suffer~~ they act in the same way
~~only from an accumulation of~~
in lessing the heat of the sun as the
Egyptian turban. –

of straw or pasteboard. They are coolest when white, but a dark color is best calculated to conceal the dust which is apt to ~~on~~ ~~attach~~ attach itself to them in summer, and it does not add much to their heat.

The Egyptians ~~from~~ protect their heads from the intense heat of their sun by a thick covering called a Turban. It excludes by its numerous folds the external heat which is ~~often at~~ often at 120 & seldom less than 108 of Farenheits thermometer, and exposes the head to its own heat only which is ~~(?)~~ many degrees lower than that of the external air. The Spaniards & Portuguese ~~protect~~ cover their

It has been ~~supposed~~ said that the head ~~(?)~~ by being uncovered in the hot sun

requires ~~that~~ an insensibility to heat
which ~~renders it less~~ defends it from many
of the diseases of the brain. It is certain
the Skulls becomes thicker & more dense
by this practise. This was long ago ascer-
-tained in walking over ~~an~~ ^of battle^ field that
was covered with the bones of a ^n^ number
of Persians and Egyptian soldiers. The
Skulls of the latter ~~who wore~~ who never
covered their heads, were known by their
greater thickness than the former. ~~Seven~~ ~~who~~
~~But the design of these pages~~ who stoop
at their labor in the sun as pavors
Jardiners in weeding, & some other classes
of ~~bet~~ people find no inconvenience from
the want of a Covering upon their heads.
But the design of this work is not to

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qualify men to be Soldiers or to ~~labour~~ stoop exclusively ~~for hard labor~~ at labor in the hot Sun. It is intended to meet the Citizens of the United States as ~~they are~~, and as they live in a Climate exposed to ~~as being exposed to, or but few of~~ rain as well as to heat in Summer. ~~and as but few of them are soldiers, and still fewer ~~stoop in the~~ labour the the open air at occupations which require stooping~~ they should cover ~~protect~~ their heads whenever they expose themselves to the rays of the Sun in hot weather.

Standing still in the Sun should be carefully avoided.

For the use of drinks to mitigate the heat of the body, the reader will please to advert to the rules that were delivered in p:

The body when much heated, or

V This Caution I know will be objected to by persons who are in the practice of sleeping with their windows open in cool and even cold weather. But let them remember that there is less danger in doing so, at those times than in the summer months. The greater the heat, the more the System suffers by a small diminution of it. This is well known & from sad experience in Egypt, and in the East and West Indies, where more diseases are induced by the Coolness of the night air, than in all the northern Countries of Europe, and in the United States.—

covered with sweat should never be exposed in a sitting posture, or at rest in any way to a Current of Air.

A Mattress should be preferred to a feather bed in Summer. The larger it is made, the more easily it admits of the body changing its ~~position~~ posture from a warm a cool part of it.

It will be unsafe ~~in the~~ in the variable weather of the middle states to sleep with the windows open in the ~~weather~~ summer months. A sudden change in the temperature of the ~~night~~ air in the night has often induced Colics, Coleras, fevers, and death in Philadelphia. It is most ~~unsafe~~ dangerous after the air becomes charged with those exhalations which produce autumnal diseases. —

The Cloathing should ^be^ gradually increased in the first Autumnal month, and it should be nearly the same as in winter, in October and November in the middle and Eastern States. Cold is the greatest ^physical^ enemy to man. It destroys millions by its sensible qualities alone, but it~~s~~ aids fevers from putrid exhalations in the business of destruction by becoming in the Autumn, their exciting Cause. Of the many thousand ~~Citizens~~ inhabitants of Philadelphia who have perished with the yellow fever since the year 1793, ~~the cold~~ ~~watches~~ a ~~light in~~ thin waiscoat, - a ride in the early morning or evening

Air, and the want of ~~a blanket or~~ sufficient bed clouthes at ~~lodging in the~~ night, have awakned the sleeping disease in most of them.

Fires should be made in the com--mon sitting room every morning & evening in September, and ~~early in the~~ during the whole day as soon as the ~~cool~~ Glass descends to 62°. of Farenheit. ~~In rainy weather~~ They not only warm the body, but they carry up the Chimney all the exhalations which insinuate themselves into the house in the Autumnal months. Fires should likewise ~~be~~ be made in Summer whenever the weather becomes unseasonably cool, and especially if it be accompanied with rain.

Let it not be said that ~~life~~ health is not worth having upon the terms of

vigilance and care that have been recom-
-mended. ~~It is purchased by~~ Considering
its immense value it is purchased by
them at a small price
~~A~~ A difference in age, occupation and sex require some
some variation in ~~the~~ Cloathing ~~should~~
~~be made~~ as well as a difference in the
seasons.

Children ~~possess stronger resisting powers~~ suffer more from heat &
~~to cold than~~ less from Cold than adults.
~~They should therefore be clad in thin~~
~~Their~~ Their Cloathing should be light in sum-
-mer, and moderately warm in winter.
Thin flannel next to their skins is
calculated to defend them from the
stomach and bowel disease to which
they are so generally subject in the
United States.

V The ~~debility which appears in~~ extenuated state of the thread of
life in old people renders it very liable to be broken
by degrees of heat and cold which are
seldom hurtful in middle life. The
former should be obviated by rest,
and artificial currents of air, and the
latter by additional cloathing more
especially upon their heads and feet.
As ~~the~~ death from cold makes its first
attack upon their feet in the night, they
should be wrapped up in flannel, or
bottles filled with ~~hot~~ warm water
should be applied to them when they go to bed.
To

The young and ~~[illegible]~~ middle aged will profit by a strict attention to the ~~[illegible] for [illegible]~~ directions for regu=lating their Cloathing that have been delivered, by the state and changes of the weather. Let the former remember ~~then~~ "if they wish to be young when they are old, (to use the words of a Spanish proverb) let them be old [that is wise] when they are young". Health is in one respect like money, the more frugally it is saved in youth, the greater capital it will produce in Old Age. —

V The ~~Cloathing~~ decay of heat in old people, and their inability to revive it by labor or exercise renders more ~~[illegible]~~ ~~of~~ Cloathing necessary for them ~~[illegible]~~ than for persons in early and middle life.

Divert the eye of Spectators from the marks of time upon the body and particularly upon the face, the of old people their clothing should not only be warmer, but more elegant and splendid than in early and middle life.

studious men become less sensible to heat, and more sensible to Cold than the other people. They often suffer from ~~the~~ ~~dhathers~~ decay of their fires in the evening, and by going to bed ~~in~~ chilly, or with Cold feet. They should avoid both by warm cloathing, and comfortable fires in their places of study, and by warming ~~a bottle filled with hot warm water should be applied to~~ their feet, ~~if they if so~~ when necessary just before they go to bed.—

Persons who ~~pursue~~ follow sedantary mechanical employments require ~~artificial~~ light Cloathing ~~modes of cooling the~~ Air in summer, and ~~stove rooms in Winter they and~~ warm Cloathing in Winter.

Mechanics who work in the

open; also laborers require light Cloathing
in Summer. Where men work under
cover, they feel the ~~least~~ heat least when
they take off their Shirts, and ~~ex~~ expose
their naked bodies to the Air. The rapid evapo=
=ration of their Sweat ~~is some rapid~~ by this means
Counteracts the heat of the Air. Where
~~the whole body and~~ all the limbs, and the
whole body are ~~in de~~ exercised in Winter,
less Cloathing is necessary than where
that State of the System does not take
place. ~~After labor~~ During the Suspension
of labor, the Cloathing should be in=
=creased, or refuge should be taken in a
warm room. —

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~~their heads and their feet should be~~
~~defended with great care from the cold.~~
Women in early and middle life ~~a power~~
~~of ear~~ bear the extremes of heat & cold
with more patience than men, but
they do not suffer less from them. It is
to be lamented that in the climate of
the United States, they are governed by the
fashions in dress ~~of~~ which prevail in
the more moderate climates of Paris &
London. hence ~~their heavy cushions upon~~ ^
~~heads in summer and~~ their ~~no~~ bare
arms and thin body cloathing in winter.
This ~~rebellious~~ want of conformity to
nature, reason, delicacy and the ~~temperature~~ ~~climate~~
extremes of heat and cold in the united
States, has greatly increased the number
of ~~stimulated~~ diseases ~~an~~ particularly of

the Pulmonary Consumption among all ranks of our Women. The pro=
=portion of female patients affected with that disease ~~to that of male~~ in the practice of the Author during the year 1808 was to that of the male as . From the ~~great in=~~ late Additions that have been made to ~~the business~~ ~~=ceased~~ ~~accession of females to the list~~ ~~of business of physicians to~~ the number of female patients from one of the causes ~~that have been~~ mentioned, it has been said very properly that "the nakedness of the women is the clothing of the physicians of the United States."

~~whether I spite of fashion~~

From a belief that my fair Coun=
=trymen will sooner or later recover from their present delirium respecting their Dress, I shall advise them to

wear flannel drawers as well as waiscoats next to their skin in cold weather, and to protect their feet with leather, ~~shoes~~ over their worsted, or silk shoes.

Of preventing diseases from bad Air.

The Air induces diseases 1st by its sensible Qualities such as heat, cold, moisture ~~and~~ dryness, density and rarity, ~~and~~

IIdly by its insensible qualities, that is by certain foreign matters ~~[illegible]~~ being diffused or mixed with it that do ~~not~~ belong to it in its natural state.

I I have already pointed out the means of defending the body from the morbid effects of all the sensible qualities the Air except its density and rarity, and these are so few in number, and so feeble in their operation when they act singly, that it will be unne-cessary to mention them.

II. ~~The foreign matters which mix~~ with, or ~~diffuse themselves in the Air are numerous; I shall briefly enumerate them.~~ simple

as the air appears to be it is composed
when in its healthy state of ~~three parts~~
w~~hich the Chemists call~~ azote ~~azote - Oxygen gas~~
~~gas and Carbonic Acid gas, of the first~~
72 ~~of the~~ parts of what the Chemists
call Azote, 27 parts of Oxygen gas, and
one of Carbonic acid gas. It is probable
Other matters enter into its composition,
but Chemical tests have as yet discovered
~~not~~ no more than those that have
been mentioned. Many matters are
mixed with the ~~matter~~ air or are diffused
through it which are foreign to its
nature, and which are a source of
~~many~~ diseases. These are exhalations
from putrefying vegetable & animal
substances - from living animal

bodies in a confined, or unhealthy state, - from respired air, - from the Air discharged from calcareous substances and fermenting liquors called Carbonic acid Gas - Inflammable air called Hydrogen Gas, - exhalations from minerals and Springs - the effluvia of certain manufactures, and the odors of certain Spices and flowers.

The exhalations or miasmata (as they are generally called arising from putrefying vegetable and animal substances con=tribute ~~they prove~~ a fruitful source of ~~unheal=~~ diseases from ~~they exist in~~ the Air. In order to the production of these exhalations, heat moisture and fermentation must com=bine. Of course they exist only in

hot climates, and seasons. In the United States they produce their ~~morbid effects~~ peculiar diseases only in the Summer and Autumnal months.

~~These~~ ~~yellow~~ ~~Ohey~~ are yellow fevers, bilious remittents, intermittents, inward fevers, Colic, cholera morbus, Dysentery, Diarrhea ~~[illegible]~~, Inflammation of the eyes, and head ach.

The means of defending the human body from these diseases so frequent and often so fatal in the United States divide themselves into two heads. ~~I shall~~

The Vegetable matters which ~~have been found~~, ~~when~~ in a state of putrefaction have been found to produce ~~these~~ this formidable Class of diseases, are exhalations from marshes, Cabbage, potatoes, pepper, Indian meal, Onions, mint, aniseed and caraway seeds, Coffee, Chocolate shells, Cotton, hemp, flax, Straw, the Canvass of old ~~[illegible]~~ tents, old books and paper money,

the timber of an old house, green wood
confined in a close cellar during the summer
months, the green timber of a new Ship
the stagnating Air of the hold of a ship, Bilge
water, water ~~that~~ has been confined in hog-
=sheads at sea. stagnating rain water, the
stagnating Air of close cellars, the matters which
usually stagnate in ~~the~~ gutters, common
~~sewers~~, Sewers, docks and Alleys of Cities &
in sinks of Kitchens, Air emitted by
agitating foul and ~~st~~ stagnating water, a
duck pond, a hogstye, weeds cut down &
exposed to heat and moisture near a house.

The animal ~~which~~ matters which
~~when~~ in a state of putrefaction have been
observed to produce the summer and
autumnal diseases which have been
enumerated are human bodies that

have been left unburied upon a field of
battle. salted beef & pork. ~~raw~~ hides confined
in stores, and in the holds of Ships, - a
Whale thrown upon the Sea shore, large
beds of Oysters, - the entrails of fish, and
privies.

~~The means~~ In suggesting the means
of ~~defend~~ preventing the diseases from the
exhalations or miasmata from all
the Sources which have been enumerated
I shall first mention the means of
guarding against ~~its most malignant~~
bilious, and malignant
~~the~~ Yellow fever ~~which is the most~~
~~malignant form~~ of our Country, &
then take notice of such as are proper
in all the inferior and milder grades
~~of the our summer and Autumnal diseases~~
summer and
~~who~~ of our Autumnal ~~ly~~ diseases that
have been mentioned.

+ These directions ~~for preventing~~ which
follow are an abridged extract from
the 4th volume of the Author's medi-
-cal inquiries and Observations. They
have been ~~read~~ chiefly by medical
Gentlemen. They are now put into a
dress which will render them intelligible
to all Classes of readers. Some of the directions
have been introduced in the former part of
this work, but the author hopes they will be more im-
-pressive from being repeated in a Connec-
-tion with facts that are related to them.

These naturally divide themselves again,[+]
– here introduce from p: 178 to 220 of the 4th
volume of medical inquiries & observations.

Health and life are sometimes endangered
by miasmata which are discharged
from living bodies when confined in
close rooms or apartments, ~~or~~ and where
~~there~~ is a want of cleanliness, and of a
sufficient quantity of wholesome provisions.
~~the fever which has obtained~~ from
its being so often generated ~~under the~~
~~above circumstances~~ in jails, hospitals,
and ships, it has obtained the name
of the jail, hospital & ship fever. It dif=
=fers from all the forms of bilious fever
in appearing only ~~in~~ under the circum=
=stances of confinement, filth, and scanty
or bad provisions that have been menti=
=oned, ~~&~~ in ~~being~~ never prevailing ~~beyond~~
generally ~~through a~~ beyond the places in

v In attacking persons of debilitated
habits chiefly, in not being attended
with remissions or intermissions,
nor with bilious discharges ~~in~~ &
rarely with inflammatory symptoms,
in being of ~~a~~ more protracted, ~~or~~
or of longer duration,

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which it is generated, in being contagious,
when persons predisposed to it are ~~wi~~
exposed within ten feet of ~~of to the sources~~
~~to~~ its miasmata; and in prevailing
~~on~~ chiefly in cool and cold weather.
The means of preventing it ~~are~~ consist in
avoiding all its causes. ~~by means~~
~~particularly the~~
~~of large and well aired rooms~~, ~~by~~
~~bodily~~
~~cleanliness and by~~ more especially
~~by the~~ foul linen and other articles
of bodily cloathing, which by confining
the perspiration for a long time, renders it putrid, & acrid,
and thus disposes it to produce fever.
The cloathing when ~~thrown worn by those~~
infected retains its power of commun-
=icating the disease for several months.

It should therefore be carefully washed,
or destroyed. Happily for the people
of the United States, the ample, or
comfortable accommodations of the
poor, their competency of cloathing
and ~~the~~ wholsome food render fevers
from human miasmata very
uncommon in our country.

Respired air called by the Chemists Azote,
nitrogen, ^system^ and sometimes phlogisticated air
when confined, produces disease & death. Dr.
Franklin informed me that ~~the celebrated~~
~~&~~ Dr Hales the ingenious Author of the treatise
upon Vegetable Staticks, had informed him
that three out of four persons had perished
with malignant fevers who seated themselves
near a hole in the Ceiling of the house of

Commons in order to take notes of a private debate. The sickness which children often contract in crowded schools is derived chiefly from the air of the school room being overcharged with respired air. It is rendered more unhealthy when the burnt air of lamps and candles ~~(which is of the same nature)~~ is added to it.

Disease and death from both these airs is to be prevented by avoiding crowded rooms, or by ~~frequently~~ ~~lin~~ ~~them~~ ~~such~~ ~~only~~ ~~as~~ having them well ventilated. From this air being lighter than common air, the ~~free~~ passage for its escape out of a room should be in the upper part of it.

Air which has been consumed by the burning of wood and coal, ~~combustion~~ is fatal to ~~human~~ animal life.

V The air impregnated with the fumes of lead, ~~is~~ and which is so injurious to all those artificers ~~that~~ work in it has been rendered in=
=offensive by a diet of fat meat. Oil of any kind taken plentifully ~~by way of~~ as aliment is calculated to produce the same salutary effects.

~~It thou It is~~ sitting or sleeping in a room in which this air is confined should be carefully avoided. apoplexies, and death have often been induced by it.

The air from burning charcoal, calcareous earths, alkalis, & fermenting bodies, which is known by the names of Carbonic Acid gas - fixed air, & mephitic air often produces giddiness, sickness, head ache apoplexy and death. It is sometimes found in a simple state by nature in wells, privies, caves, and upon the surface of the earth. It may be known by suddenly extinguishing a Candle. This ~~[illegible]~~ test of its presence ~~is sufficient to~~ should deter from exposing ourselves to it.

The other sources of impure air that have been mentioned are so

& it will not be necessary for us to live or to travel with a Eudiometer in our hands to determine the impurities of the Air we breathe; on the contrary

uncommon in the United States, and so rarely hurtful, that it will be unnecessary to suggest any Cautions to prevent them inducing either disease or death. —

The ~~facts~~ Rules that have been delivered upon the Subjects of Cloathing and Air if attended to will save much trouble in detailing the situations in which ~~life~~ health and life may be preserved to the most Advantage. With the ~~Advantages~~ aids we are capable of deriving from experi=ence and season, the city and the Coun=try ~~no Spot in the United States should be considered as unhealthy.~~ ~~the hill~~ mountains and the Valleys ~~and~~ the Shores of ~~our~~ our rivers, from ~~and those~~ St ~~Au~~ Marys to St Croix, and the plains remote from them, ~~the Sands of Georgia and the frozen~~ soil ~~of Maine~~ in the United States

v deficient state of knowledge and industry in individuals and public bodies with respect to the means of obviating the diseases which arise from the insensible qualities of the Air,

may all be inhabited, ~~and~~ by persons
in good health, and ~~since~~ the diseases
incident to each of them be avoided. If
this were ~~the~~ not the case, the greatest
part of our Globe ~~was ...~~ was made
in vain. I ~~excep~~ except from this
general remark, persons predisposed by
previous debility to ~~particular~~ disease. The situations with
respect to Air, as well as other things
which ~~influence health~~ are proper ~~for~~ such persons shall be taken
notice off hereafter. ~~ignorance & indolence with~~

In the present ~~state~~ of ~~our globe~~ a changing
~~respect to the~~ ~~to~~ benefit will be derived from ~~changing~~
~~the~~ it ~~...~~ by the following Classes of people.
Children born in Cities should pass their
Summers for the first seven years of their
lives when practicable in the Country.

men of ~~business~~ leisure who reside in Cities will ~~find~~ preserve their health, and prolong their lives ~~either~~ by spending their summers in the Country. Men of business, who ~~be~~ reside in Cities, will ~~be bes~~ derive nearly the same advantages from spending their evenings and nights in the Country.

Old people who have passed their lives in the Country will avoid many of the diseases and much of the distress peculiar to their time of life, by retiring to a City in which they will have company upon easy terms, - warm houses, convenient access of a place of worship, and that variety of cordial aliment ~~(purples)~~ (so ~~agreeable & and~~ necessary to old) which is to be met with in much greater abundance in a City market than

upon a farm.

A To ~~old people~~ ~~affluents~~ ~~persons in easy circumstances~~, a
change from a Cold, to a warm Climate ~~[illegible]~~
~~formerly warm~~, has often added years
of ~~life~~ health and life to Old people.
The wealthy ~~Romans~~ Citizens of Rome
~~in the decline of life~~ ~~a~~ removed to
Naples, ~~and the~~ in the decline of life,
and ~~the~~ the wealthy Portuguese ~~&~~ frequently
emigrate to the Brazils in order by
getting nearer to the sun to ~~partake~~
~~of his heat~~ protract beneath his
stimulating ~~and cordial~~ heat, the duration
of their lives. —

~~men~~ mechanics and manufacturers who work in
companies, and in small rooms should
often change their Air. see pathol: or therap:

Of Exercise

The human body is so contrived that the actions of its muscles is necessary to ~~promote the~~ ~~healthy~~ ~~action of all its other parts~~ keep up the healthy actions of all its other parts. This is ~~to~~ effected by means of labor and exercise. — The former ~~is a was~~ was not only the means ~~was a condition~~ of man's existence, but of his innocence ~~it but the condition of mans existence~~ and happiness. It was the ~~m~~ ~~the~~ ~~imperative of~~ ~~heaven~~ in paradise. ~~& the~~ It was it is true ~~of~~ limited in its degrees & in its ~~to be~~ ~~few~~ objects. ~~& degrees were of~~ ~~the tree, and the~~ ~~and those of~~ so as to be carried on with original pleasure. ~~a pleasant nature~~. ~~The duty & of~~ nor was he deprived of it ~~was not abstracted from him it~~ after his fall. ~~The~~ objects were extended only from the garden to the wilderness & the field, and the degrees of it which ~~were made~~

were made necessary to his subsistence ~~to muscles greater as to exertion~~ were so much encreased as to induce a Sweat ~~not so great as to be accompanied with~~ upon ~~the heat of~~ his brow. ~~with those exertions that cover the body with Sweat.~~ But ~~except~~ in this change of the Objects and degrees of labor ~~Heaven~~ the Creator appears to be still kind ~~discovers its kindness~~ to man. the changes which his had introduced into his mind ~~body~~ as well as his body rendered a larger portion of those means which were intended to prevent it ~~evil~~ necessary to cure ~~relieve~~ it, and even the ~~that~~ upon the mark ~~body~~ of this additional labor his brow, ~~is Sweat~~ became the means of rendering it inof=fensive to his Constitution. The truth of these remarks is manifest from the good health & happiness &

longevity which have accompanied labor in all ages & countries. Where it has been otherwise, it has been because tyranny has rendered it excessive in its degrees, or deprived the subjects of it of the quantity of aliment, and Cloathing which ~~was~~ were necessary to render it tollerable, or where folly and vice have connected it with the use of ardent spirits. ~~intemperance or~~

I have said labor is conducive to ~~to~~ the preservation of health and the cure of vice, ~~but~~ when submitted to in the degrees intended by heaven; ~~it is always attended after a while with pleasure. This the original Connection~~ but the same law of our

nature which converts ~~painful~~ the disagree-
=able & painful impressions ~~from certain impressions~~
upon our senses by repetition into
such as are agreeable & pleasurable
converts by habit the pain of labor ~~by habit~~
into pleasure. Of this thousand can
bear witness who ~~have~~ have resorted ~~with the morning sun~~ ~~to~~
with the dawn of day to
the spade, ~~and~~ the plough, ~~to~~ the hammer
and the anvil with alacrity & left them
with reluctance with the setting sun.
Its pleasurable nature of labor is
evinced still further by the languor
& even distress which attend its intervals
when protracted beyond the times of which
~~require~~ nature requires to ~~wind up~~ renew the
~~machinery~~ strength of the body. ~~The toilsome~~

~~this history friendly~~ obvious & acknowledged operation of labor
~~of our bodies, has often consoled the~~
~~[illegible] in [illegible]~~ in beholding ~~[illegible] which~~
~~has is both [illegible]~~ upon the human
body ~~has led me to suppose~~ leads to a belief
that it is attended with the ~~same~~ pleasant
effects ~~upon~~ in other animals, and is thus
calculated to reconcile ~~it~~ us to our moderate and
just exactions of it ~~from labor~~ from these, for
our benefit or our pleasure.

~~The~~ However necessary, useful, and
even pleasant labor may be, ~~it is plain~~
~~that~~ the business and duties of civilized so-
-ciety plainly indicate that it cannot be
universal ~~as shown in~~ after the manner of its
original institution. ~~Even a sense of its~~
~~importance~~ Taught by suffering from ~~the~~

neglecting it, man has resorted to Exercise
as a substitute for it. ~~God made labor~~ ~~It has many~~
~~of its advantages, but after all~~ it is so far
~~inferior to~~ labor ~~that it carries with it marks~~
~~of its origin its de~~ ~~but man~~ ~~[illegible]~~ with
all its advantages, it is much inferior to
labor ~~in its~~. Thus we see God made labor
but man made exercise. ~~However~~ Useful
as the latter ~~as it~~ may be, it carries its marks of inferior origin ~~inferiority to the~~
~~[illegible]~~ in its being less constant, or more partial
and often more deficient or excessive in its degrees
than that which is the gift and command of
Heaven.

Bodily Exercise ~~the following~~ is necessary to the following classes of people. ~~have~~ ~~have~~

1 Persons ~~wholly~~ ~~[illegible]~~ in affluent & independant Circumstances who are not engaged in business.
2 Studious men who ~~labor with their~~ lead sedantary ~~lif~~ lives.
3 Artificers who labour with only a part of their bodies, and
4 Invalids.

Bodily exercise has been divided into active passive and into that which partakes of each of them, or that is of a mixed nature.

~~It is further divid~~

To the active exercises belong walking, run=ning, jumping, swimming, skating, Dancing, Quoits, foot ball, fives, Cricket, Golf, Shuttle Cock reading aloud, singing and ~~some others~~

To the passive exercises belong riding in a ~~Carriage, in swinging~~, rocking in a Cradle ~~&~~ sailing ~~&~~ swinging. riding in a Carriage frictions.

To the mixed exercises belong, riding on horseback - ~~rowing~~, and some others which are taken from labor such as rowing, digging in a Garden, cutting & sawing wood.

The following rules should be observed in the use of ~~all~~ exercise.

1 The whole body should, when practicable be exercised. In this way every part ~~of the~~

~~to~~ of it will be alike strengthened, and thus an equilibrium of health be preserved. Exercise moreover can be protracted longer in this manner, and of course more benefit be derived from it than when it is partial in its opera=tion. Of this we see a striking proof in the less fatigue that is felt in climbing a ladder in which the hands are employ=ed as well as the feet, than in walking up a pair of stairs in which the feet only are exercised. In walking, the arms move necessarily, among civilized men, ~~among civilized nations~~, ~~but this not the case~~ in consequence of which they share in a small degree with the lower limbs in the advantages ~~benefit~~ of that exercise, but among the Indians who employ their arms ~~hands~~ in supporting their blankets around their bodies, this is not

the case, hence they become fatigued ~~sooner~~ from walking sooner than their civilized Neigh-bours. To obviate this fatigue ~~they~~ in their long marches they take up a stick of wood, or a rail, and carry it in their arms or upon their shoulders for an hour or two, ~~by which means they~~ and then throw it away. ~~After~~ By this, ~~practice~~ they ~~impart invigorate their an equilibrium of~~ equalise the strength of their whole, ~~and~~ bodies, and remove the sense of weariness from their lower limbs.

2 Exercise should never be used ~~that~~ until it induces fatigue. ~~Persons should desist from it as we are directed to do from eating, with a desire for more~~ Whenever this is felt, the system ~~is~~ becomes predisposed to disease. ~~from and the ...~~ Persons should

desist from exercise, as we ~~are directed~~
~~to~~ should from an eating - with an
~~desire for~~ inclination for more. —

3 It is ~~so~~ unsafe when used before
breakfast in the morning, and after
night in the open air more especially
during the prevalence of the diseases of the
summer & autumnal months.

4 It should be preferred in the open
Air in ~~cy~~ dry weather. + but never ~~Exercise and~~
in ~~extremely warm the hot sun~~
~~the effects~~ Exercise in a ~~warm~~ close
~~in~~ room ~~alters the qua~~ not only in-
-creases the perspiration but alters its
qualities, so as to ~~render~~ dispose it ~~a~~ to
produce disease. A proof of this was men-
-tioned in ~~p~~ the last page of the Chapter
upon Air. —

5 ~~when~~ sweat should be avoided in the use of exercise, but where it has been induced, the linnen should be changed, or great care should be taken not to rest suddenly, nor in a cool place nor in a current of air.

6 Exercise should never be used ~~in~~ less than three or four hours after a full meal.

7 In all the different kinds of exercise the dress and ligatures upon the body & limbs should be loose, otherwise ~~by~~ from the swelling of the muscles, they will give pain, and thus ~~[illegible]~~ defeat the benefits of exercise.

8 In travelling ~~the less the~~ little should ~~should be suited to the situation of~~

~~life, ages, sex, occupation and season~~
~~of the years~~ be eaten ~~during the day~~,
~~and~~ Until the journey of the day is
over, ~~whereas~~ and if there is a disposition
to fatigue from riding, it will be
useful to walk the floor for half
an hour before rest be taken either
in a sitting or lying posture.

In travelling upon foot, rest
should always be taken in a recumbent
posture. The muscles are thus equally
relaxed, and ~~the~~ [remains of their] excitement equalized. ~~The~~
I was first struck with the [sudden] ~~best~~ relief from
fatigue obtained by this practice ~~in~~ [by] the
[Soldiers of the] American Army during the revolutionary War.
After lying down for [twenty minutes] ~~half an hour a quarter~~
or half an hour upon the grass, they rose
in an alert manner, and ran to their
Quarters as if they had just risen from their beds.

Exercise should be suited to situation
in life, age, occupation - season of the
year, and predisposition to particular
diseases. —

Walking is the best mode of exercise
for preserving health, and should be
preferred by all persons who are ~~a~~ in
easy circumstances. It exercises all the
and particularly
muscles of the body, ~~it produces a con-~~
~~stant of Air are but chiefly~~ the
the effects of
lower limbs in which ~~the~~ ^ excess ~~of~~
in are
~~eating and~~ drinking ^ ~~is~~ ~~are~~ most apt to
promotes perspi-
show
~~deposit~~ themselves. It ~~prom affords a~~
the body
~~constant su~~ -ration, and carries ~~it~~ im-
-mediately beyond its influence by a con-
-stant ~~and fresh~~ supply of fresh Air.
Next to walking, riding ~~on~~ horseback

should be used by persons ~~who~~ who are not
not obliged to work for their ~~subsistence~~ Subsistence.
– It strengthens the breast, and restores
the Stomach and bowels by gently
agitating them, from the effects of
~~[illegible]~~ intemperance in eating. ~~[illegible]~~ To
the exercises ~~may~~ should be added swimming & the manly
games of football, fives, cricket, quoits, & Golf,
Rocking in a cradle ~~in~~ and riding in
~~walking riding in a [illegible]~~ a Carriage,
will be useful to children before they
are able to walk. I know ~~that objec~~ an
it has been objected ~~some have been made~~ to the former
mode of exercise, ~~and~~ that it injures
the brains of Children, and thereby im-
-pairs their intellects. ~~It might to be~~ two answers may
be given to this
~~sufficient to reply in answer to this~~

Objection ~~to say there are no proofs of the~~ ~~facts, on~~ 1st the ~~contrary, the~~ wisest men that ever lived, have passed through a Cradle to their eminent stations in the world, and 2: by ~~exercise similar to~~ rocking ~~is that the kind of exercise~~ ~~which~~ approaches nearest to that kind of exercise to which ~~an infants an infants life it is~~ an infant is accustomed before its birth more especially during the ~~nine [illegible]~~ night, ~~when~~ from the tossings and turnings of its mother in bed; of course it must be not only agreeable, but natural ~~to~~ in the first months of infancy. It aids by its gentle the invo- ~~stimulus,~~ -luntary exercises of their little limbs ~~flame~~ fanning ~~in as a stimulus~~ in ~~supporting the~~ the flame of animal ~~the the~~ life while it is in its ~~from~~ ~~now~~

~~feeble~~ weak and forming state.

In youth and middle life the exercises should be walking riding, jumping, dancing, skating, swimming, digging in a garden, cutting & sawing wood, and the more active games which have been mentioned.

In old age the exercises should ~~be those~~ ~~those of infancy and childhood~~ chiefly of a passive & mixed nature. moderate walking, Riding in a Carriage, Sailing, reading aloud, talking ~~and~~ and ~~or talking~~ singing. The three last, by the impetus they ~~impart~~ give to the blood in passing through the lungs, invigorate the whole system. The "narrative" disposition so common & so unjustly complained off in old ~~age~~ people, is one of the strongest liga-ments of their lives, and the greater facility with which they are able

to exercise this disposition in cities, ~~than~~ ~~in the Country~~, is one reason why ~~more~~ ~~of~~ instances of longevity are more common in them ~~latter [illegible]~~ than in ~~the latter~~ Country places. "I will practice physic (said an old physician in England) as long as I live; for ~~by~~ if I retire from business, I shall be deserted by the world, and have no body to talk to; but while I continue to exercise my profession I can compel my patients to hear my conversation."

~~Women, ~~require less exercise than~~ from the greater excita-~~bility~~ ~~[illegible] from~~ of their systems ~~yielding~~ require less exercise than men. It was be-cause they bore sedentary employments~~

~~without being much injured by them~~
~~that the business of the Taylor was~~
~~carried on by them in ancient Rome~~

When old people ~~have advanced~~ are confined to their houses by bad weather, or when they are advanced beyond that period in which exercise is safe or practicable, ~~their limbs or~~ frictions should be used to their limbs and bodies. In China there is a class of men who maintain them=selves by going from house to house like hairdressers in other countries, in order to apply this remedy to ~~the~~ persons in the decline of life. They first gently strike them with the side of the hand, & then ~~not~~ follow these strokes by gentle ~~rubbing~~ frictions either with a dry

hand, or a peice of silk or muslin
impregnated with the smoke of myrrh,
or some other fragant & stimulating
gum. ~~It is~~ The operation is called Champooing. It
is said ~~of~~ a man of 65 ~~years of age~~ after having
submitted to it in the morning, walks
out afterwards with the vigor & complexion
of a man of fifty years of age. ~~that belong to the 50s~~
~~of 50 years of~~ from the return of that state of the system
~~year~~ Old people who are advanced to that
stage of life which has been called de-
-crepitude should ~~to [illegible]~~ not be per-
-mitted to walk upon uneven ground
without the support of a staff, or
of what will be much better the
arms of a friend. ~~From the return~~
~~of the weakness of that state of the~~

System in old people which takes place in infancy,
they are disposed to stumble in walking, and from
their losing a prompt command over
their voluntary Actions, they are unable
to ~~throw out their arms so as to pre~~
~~serve~~ preserve their centre of gravity
by the balance of their Arms, ~~or~~ and
~~to defend their heads and bodies from~~
~~injuries~~ hence, they generally fall, and
from ~~the same~~ an inability to project their
Arms in falling, they ~~whole~~ often
injure their heads and sometimes break
or dislocate their bones. Accidents of
this kind are very common in the
practice of all physicians. They should
be prevented by never permitting ~~old~~ very
old people to walk upon uneven ground—

V Many Studious men ~~Studious men~~ & who have lived to be very old ~~men have spent~~ the

have spent the last years of ~~long~~ their lives in their closets

free from pain and disease. The celebrated

Mr Bayle ~~lived more~~ breathed no other

air than that of his room in

~~from years for before~~ during

the greatest part of his life. But ~~in these~~

without the support of a Staff: or what will be much better, the arm of a friend. —

It is a fact worthy of notice that the body suffers less from the want of exercise in the ~~feeble~~ state of old age which has been called decrepitude than in any of the previous stages of life. Thousands of old people in whom the exercises of the mind do not supply the defect of activity of the body pass from ~~40~~ their 80th: to their 90th: and even 100th year in an arm chair, or in that state in which they are said to be bed-ridden; ~~who are totally destitute of the vicarious with good appetites~~ During this time they eat heartily and sleep well. It would seem in these cases as if the habit of living rendered the system less dependant upon the stimuli which gave the first impulses to ~~life~~ the motions of life. Perhaps too the acrimony

of all their sensations & exertions acquired by age, may supply by ~~their~~ its stimulating qualities the absence of the stimulus of exercise. —

~~without~~ the support of a staff or what will be much better the arm of a ~~Child, a grand Child, or a~~ friend.

Women, from the greater ~~exci~~ irritability of their systems, ~~the~~ require less exercise to preserve their health than men. They were for this reason destined to the sedentary employment of the Taylor in ancient Rome. The activity of their minds supplies ~~light~~ in a degree the exercise of their bodies. Domestic ~~labor~~, labor, ~~domestic~~ ~~The~~ Walking, dancing, and riding on horseback and in a Carriage are the exercises most proper for them. They should never be dispensed with when practicable at any time of life, but they are most indicated about the

age of puberty. It is at this time of life the female constitution is formed, & ~~from~~ on the manner in which it is ~~passed~~ spent depends the future health, or sickliness of a woman. Let no day pass therefore between the ages of 14 and 20, without a walk, or a ride in the open air, and when this is forbidden by bad weather let a double portion of domestic labor consisting in making beds, rubbing furniture, and the like be performed by them. Women derive ~~the same~~ great advantages from exercising their lungs in ~~speech~~ speaking—reading aloud, and singing, ~~that have just now been ascribed to old p~~ and it for this reason probably that they are more disposed by nature to all of them than men. A ~~silent woman is~~ Taciturnity & bad health ~~are~~ generally go together in a Woman.

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If they are less agreeable or instructing in the use of ~~their~~ organs ~~and~~ voice & speech than ~~women~~ they should be, ~~women~~ the others, it becomes ~~them~~ to inquire whether they are not made so by the neglect of their education; or by making ~~them~~ it to consist in external accomplishments rather than in ~~useful~~ just principles and useful knowledge. —

Studious men suffer from their sitting posture, and often from pressing their desks with their breast or bowels in writing. By the exercises of their minds, they abstract ~~thoughts~~ nervous influence so necessary to the health of every part of the body from the trunk of the body particularly the stomach, and ~~the~~ from the lower limbs. Their bodily exercises of course

& in favor of walking. It was the principal mode of exercise of a Sect of philosophers in Greece, who obtained from it the name of Peripateticks. It not only equalizes the ~~b~~ excitement of all the muscular parts of the body, but it ~~[illegible]~~ aids the ~~[illegible]~~ operations of the mind. We are taught by others in our Closets, but we teach ourselves in our ~~[illegible]~~ walks.

should be such as are calculated to
restore the equilibrium of nervous
influence to ~~the~~ every part of the body.
They should be walking, jumping, foot ball
swimming, skating
rowing, Cutting & sawing wood, and riding on
horseback. ~~the ex~~ Too much cannot be said
that are proper for studious people
The same exercises, will be equally ~~so proper~~ for
men who pursue sedentary Occupations of
all kinds, & in which the ~~stomach~~, bowels &
lower limbs are in a passive state. In ex=
~~In exercising~~ =ercising those
~~But while those~~ parts of the body, ~~which~~
~~have suffered~~ ~~have been passive~~, care should
those
should be taken to exercise ~~the arms~~
which have been occupied ~~by ~~ in
business, by new exercises. Thus ~~the~~
~~Arms of a painter a taylor a shoemaker~~
~~and of~~ all those mechanics & artificers
who work exclusively with their arms,
should employ them in the intervals of their
labor in cutting ~~wood~~ or sawing wood - or

in rowing, digging in a garden, or in play=
=ing at quoits or Goff. By these means
all the muscles of their arms will be brought into ~~action~~
and equal strength be imparted to each of them.
~~This change in the employments of labor should extend to arti=~~
~~=ficers of all kind.~~

Similar advantages would attend a change
in the exercises or labors of artificers of all
kind. The limbs of the mason ~~and~~ the Carpenter & the Smith would
be strengthened by the labors of the harvest
field, and the same benefits would be ~~seen~~ enjoyed by
the farmer from his taking ~~the~~ now &
then a hammer and a trowel into his
hands and repairing the decay brought by time
upon his house and barn. —

~~The~~ ~~All~~ the specific kinds of exercises that ~~have been~~ are proper
~~mentioned should be accommodated to the~~
~~predisposition of~~ for persons who labour
under peculiar predisposition to certain dis=
=eases shall be ~~the~~ noticed in another place.

Having recommended riding on Horseback as one of the first and best modes of exercise for promoting health, the reader I hope will not be offended ~~by~~ at my subjoining to this Chapter a few directions for preser=
=ving the health of the ~~noble~~ animal ~~that~~ that is ~~to~~ the instrument of ~~[illegible] for~~ this ~~to which we owe so much of our~~ exercise. We owe him many ~~other~~ obligations. ~~Plea=~~
~~=sure and interest~~ Agriculture & commerce, pleasure and interest are all his debtors, but I ~~solicit a place in this~~ found my petition for a place in this work for the ~~a place in this~~ directions ~~rules~~ I am about to deliver chiefly upon his contributions to the health of man.

1 A horse ~~feeds always~~ inclines to eat constantly. He is compelled to do so by the small size of his stomach. It is necessary therefore that he should always have access to food when he is not under the saddle, nor in harness. The reason why

horses in this Country lose their flesh ~~when horses fall away~~ ~~After~~ the first of June ~~when they were in pasture~~ is because they ~~in the middle states Country is because~~ ~~the heat of the sun drives them to seek the shade, and flies prevent them~~ are kept from feeding con-stantly by the heat of the sun driving them to seek the shade and by the annoy-ance of flies. Both these causes operate in the field, and the latter in a stable with open windows. To obviate both, a horse should be kept in a dark stable in the day time, and let out to pasture only in the night. The heat of a dark stable is less hurtful to ~~them~~ him than the biting of flies, and the night protects him ~~at...~~ from both flies and the heat of the sun. As a proof of the correctness of this direction it has been remarked that a horse acquires more flesh and fat in three weeks in the

& remembred, that the stable should
be darkned only when the flies are
troublesome to ^a horses. At all other
times ~~they should be~~ light should
be let into the stable by means of
a glass window. ~~which~~ From the
neglect of this direction many
horses become blind in consequence
of the violent impression of the
light upon their eyes when they
are first taken out of a stable.

month of June than he does in all the
succeeding hot months. I wish it to be V

2 A horse acquires more nourishment
in a shorter time by feeding upon hay
than grass. He cannot preserve his flesh
upon less than twelve pounds of hay in
the four & twenty hours. ~~Fif~~ Sixteen pounds
are usually given to a Dragoon horse in ~~the~~
that time in the British army.

3 The longer a horse is in taking his ~~[illegible]~~ food
the more strength it imparts to him. The
old field horse (as he is called in Maryland)
owes his uncommon hardihood to the
long time he spends in picking up ~~his~~ the
low and slender grass of an old, or fallow
field.

4 To induce a ~~f~~ horse to feed constantly,
and to masticate his food thoroughly,
but little should be put into his

rack or manger at a time

5 Old hay is better than new, and timothy grass is said to be better than Clover.

6 Indian Corn affords the most, and Oats the least nourishment to a horse of any of the grains. ~~they afford~~ all the grains afford one third more nourishment when they are ground, and one half more when they are boiled, or baked. In Holland horses are fed ~~with coarse~~ with grain made into a coarse bread. It is useful to mix cut hay, or straw with all the small grains that are given to a horse. The cob should be ground, and given with Indian Corn to a horse. All these substances act by compelling a horse to masticate

his food more completely, and they further
render by the stimulus of distention in
the stomach less food necessary to support
~~the~~ his strength and activity. Oats from
being less stimulating than other grains
should be prefered for a horse when he tra=
=vels.

¶ I mentioned formerly that a horse when he feeds upon hay or
grain seldom makes use of his fore
teeth as he does when he feeds upon
grass; for which reason ~~horses~~ his foreteeth become so
elongated as to prevent ~~their~~ his jaw teeth
coming in contact, by which means ~~they~~ he
~~are~~ is unable to grind ~~their~~ his food, and swallow
it in an undivided state; and hence ~~they~~ he
becomes poor and weak with the greatest
quantity of aliment that can be given
to ~~them~~ him. To prevent this, where it is

not convenient to send him to pasture, he should be fed once or twice every week upon unshelled Corn; ~~or~~ that is Corn upon the Cob. ~~By~~ In feeding upon Corn in this state he is forced to use his ~~jaw~~ fore teeth, and thus keeps them from projecting from their Sockets above the level of the jaw teeth. There is Oeconomy as well as humanity in this practice, for where a horse ceases to ~~masticate~~ grind his food with his jaw teeth, he consumes a double ~~twice~~ quantity ~~as much~~ of it and is thus kept at a double expense.

8 The oftner the food of a horse is changed the better.

9 a little salt now & then mixed with the food of a horse helps his digestion, & obviates Worms.

10 ~~a horse~~ [He] should drink twice a day in Winter and three times a day in Summer ~~while he~~ when kept in a stable.

11 He should stand upon ~~an even floor~~ an even floor, or nearly so in a stable. A Declivity ~~behind~~ descending from the manger, although it favours the descent of the Urine fatigues a horse by throwing an undue proportion of his weight upon his hind legs, which disposes them to swell, also to a Disease ~~keep in his feet~~ in them, known by the name of the Scratches. The Urine should be made to pass through a hole into the ground under his belly.

12 A warm stable in Winter is favourable to the health and flesh of a horse. It saves food, for in a cold stable he eats to keep himself warm. The Germans ~~in Penn~~ farmers in Pennsylvania ~~to whom this practice~~

~~[illegible]~~ have long ~~profitted~~ benefitted both themselves and their horses by this practice. In very cold weather, ~~as~~ the body of a horse should be covered with a blanket, where his stable is not sufficiently warm. —

13 Great attention should be paid to the shoeing of a horse. His ~~ha~~ gaits & his health, and often the safety of his rider depend upon it. For some useful directions upon this the reader is referred to White's farriery.

14 A horse should be well cleaned & curried every day.

15 He should be ~~ca~~ taken to a stream of water ~~and~~ once or twice a week in warm weather, and made to exercise his limbs by swimming. By this means ~~muscles [illegible] be bro[ught] into~~

~~Action which are ~~ ~~are merely passive~~

~~in his ordinary~~ gaits, and new actions will be

given to his muscles and his health &

strength thereby be improved. The swimming

will further serve to wash his skin.

16 He should used tenderly when he is shed-

-ding his coat, being weaker at that time

than at any other season of the year.

17 In performing a short & rapid journey of thirty

or forty miles in a day, a horse should

eat but little grain. In protracted journies which are performed

slowly he should eat grain moderately during the

day, and plentifully at night. This will

be the more necessary from his not having

time enough ~~enough~~ to eat as much hay or

grass in the day time as will be suffici-

-ent to fill up his blood vessels & keep

up his flesh.

18 never suffer a horse to drink well or spring water when he is warm. It often founders ~~a horse~~ horse, or in other words, produces a rheumatism in his feet. Running water in summer, and when cold in winter (from ~~the horse's~~ his feet coming in contact with it before he drinks) seldom injures him.

19 He should well rubbed at every stage in travelling. It removes fatigue by ex=citing the ~~fibres and~~ muscles of his limbs.

20 Always take off the saddle or harness from a horse when you stop to feed him. It cools him and makes his rest more complete. Washing his back and breast with cold water, or throwing a bucket of cold water

upon ~~it~~ them, prevents ~~it~~ their being galled by the saddle ~~and~~ or harness. If he wet with sweat, and not much fatigued, the ~~hot~~ cold water may be thrown over his whole body. His feet should be often washed with cold water in hot weather both in travelling & in the stable.

21 After hard riding, or driving a horse do not permit him to rest suddenly. By walking him for a quarter an hour you prevent stiffness and founder.

22 Never permit a horse to stand in the open air after night if he ~~[illegible]~~ too much fatigued. The locked jaw is sometimes brought on by the action of the night air upon him.

23 Always ride slowly for two ~~[illegible]~~ or

three miles after you leave a stage, also up and down a hill. In Scotland they ~~the Scotch people~~ express the latter part of this direction in verse." up hill & down hill gang slow.

" Feed well & rub sare

" and ~~and~~ on a plain never spare.

24 Throw as much of your weight as possible in riding near the shoulders of a horse. Heavy baggage placed over his kidneys is always hurtful to him, especially if his gait be a trot.

25 It is common to advise riding with a tight rein, in order to prevent a horse's stumbling, but some late writers upon farriery say it is often the cause of it ~~causes a horse him to stumble~~.

The famous Mr John Wesley rode many thousand miles every year with the reins

of his bridle thrown over his horses neck,
without ~~being once thrown from his horse~~ his stumbling by which means
he was able to read with nearly as much ad=
=vantage as if he were in his study.

26 Horses possess a social principle in a high degree more especially such of them as are good tempered; but their society is very limited. An hundred horses in a field pair themselves ~~pair themselves~~, which pair feed and drink together. Two horses that have travelled ~~a~~ along side with each other, and are afterwards confined in the same ~~field~~ pasture will seldom leave each other, even though one of them is addicted to leaping fences. A horse therefore always travels the better for his companion by his side, or

before him. It would be a good practice for a Gentleman upon this account, who travels with a servant to oblige him to ride before ~~to~~ instead of behind him. To derive benefit from this social principle in horses they should always be fed & stabled together upon a journey.

27 The sound of a human voice has an agreeable effect upon the spirits & strength of a horse. An experienced ploughman once told me, that his horses performed with twice as much spirit when he sang to them, as when he did not. In this respect the horse is upon a footing with the human species. Soldiers march with double spirit with the noise of the fife and drum sounding

in their case.

28 If a horse flag, near the close of a journey, ardent spirits or porter mixed with his food, will reexcite his strength. They should be given at no other time, for ~~their good effects are~~ they produce only ~~never permanent, and a~~ a short, and transient ~~exertion~~ stimulus, barely sufficient to carry ~~a horse~~ him to the end of his journey.

By a careful attention to ~~From a neglect of~~ those directions horses which in this Country are often worn out or useless at thirteen or fourteen years of Age ~~By~~ may be kept alive & fit for service, for twenty or five and twenty years, much to our benefit & the credit of humanity.

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Of Sleep

~~Among the many paradoxes in Science with which modern times have teemed, few have been more absurd than that portion of the belief held by~~ The late Marquis of Condorcet ~~has taken pains to prove~~ that Sleep ~~was~~ is a disease, and that philosophy ~~would~~ will one day find a remedy for it. In the present constitution of our bodies that day can never arrive. ~~Admit it~~ ~~Did we admit it to be a disease, we must~~ Had he said it was a remedy for disease, he would have been more correct. ~~It~~ Happily for us, it removes light indispositions by equalizing the excitement of the system — it ~~restores~~ renews that Substance or Quality in the body upon which Stimuli act in the production of life — ~~it drives its restores~~ it dissolves ~~the~~ dangerous associations of ideas, ~~which in a when the~~

~~in a house if not interrupted by sleep~~ [light] ~~would~~
~~mind is under the influence of a durable passion~~
~~would produce in a in a hundred instances~~
~~produce derangement~~, and ~~it~~ lastly it restores the
Understanding and moral faculty to their
elevated & preeminent seats in the mind &
thus prevents both disease and vice. "~~without~~
~~Sleep and hope man (says Mr Kant)~~
~~would be the most miserable creature~~
~~upon the face of the earth."~~ ~~Shakespeare's~~
~~Account of Sleep accords more perfectly with~~
This account of Sleep ~~is expressed in more~~ accords with the
history of it given by the great philosopher
as well as poet of nature, ~~Shakespeare~~.

"Sleep - knits up the ravelled sleeve of care.
—— Sore labors bath,
"Balm of hurt minds, great nature's
second course.
"Chief nourisher, in life's feast. —'

well therefore has Mr Kant said "without Sleep
& hope man would be the most miserable

creature upon the face of the earth".

I shall now deliver some general rules upon this subject.

1 Sleep should never exceed 7 ~~8~~ or eight hours in the twenty four. Persons in health never require more, and many people ~~who~~ enjoy good health with less. The celebrated Mr. John Wesley slept but six hours in the ~~tw~~ twenty four during the greatest part of ~~his~~ his active life which lasted ~~till~~ until he was nearly 86 years of age. ~~History~~ ~~records~~ ~~the~~ ~~hours~~ ~~studious~~ ~~men~~ History records the names of many studious men who have lived long and in health upon even less sleep that ~~the~~ the degrees of it which have been mentioned.

2 ~~Sleep should be taken~~ Great advantages to health will arise from going to bed at an early hour. ~~The system about~~

~~I ablach and acoes a slight pass~~

The System ^by this means^ is suffered to repose After the impressions of the day have exhausted its natural stock of excitability, and before it ~~...~~ is exposed to the artificial stimu=
=li of study, ~~or~~ company or strong drink.

~~The~~ a recumbent posture of the body ~~favours~~ this ^feeble^ state of the System, and prepares it for the recruits of sleep. By going to bed early, we are enabled to rise ~~with the ...~~ early. The morning favours study and business. ~~and is thus conducive to health~~ It favours likewise ~~one~~ ^the regularity of^ of the excretions to be mentioned here=
=after, all of which conduce to health.

The late Lord Mansfield who. was very attentive to all the circumstances that promote longevity, once remarked that

he had never known a long lived person
who was not an early riser. —

An advantage will be derived from
going to bed and rising at the same hours.
The system ~~acquires a habit~~ conforms to them, by
which means ~~they both become to take~~ sleeping and waking
place in an easy and natural manner.

3 ~~The~~ In the savage state sleep is safe &
agreeable with the head in a horizontal
line with the body, but civilized man
~~requires from the~~ requires that his head
should be somewhat elevated above the
shoulders. A pillow serves this purpose,
and ~~when~~ so necessary does it become
from habit that a saddle, a log, ~~saddle~~, a pile of
leaves, ~~&c~~ and even a stone are
sometimes resorted to to supply its place.

The ~~lower upper~~ limbs should be mode=
=rately bent in sleep, and a habit of
sleeping constantly upon the same side should be
carefully avoided. It will be useful
to sleep alternately ~~on~~ upon ~~both~~ each
side ~~s~~ every other night, & still better
to upon each side ~~change the sides~~ every night. ~~From~~
The neglect of this practice has often
~~the neglect of The effects of a contrary~~
~~practice have appeared in~~ been
attended with ~~the~~ most serious con=
=sequences. ~~For~~ During the last seven years
of my life, I have met with but one
case of palsy in which ~~the~~ patients
did not acknowledge they had been in
the habit of sleeping only upon the
the same side. Sleep upon the

back should likewise be carefully avoided. ~~Pers~~ The night mare attacks most frequently in this posture of the body. Persons who ~~are found dead in~~ die suddenly in the ~~their beds~~ night, are generally found upon their backs in the morning. —

4 When sleep is required, or indulged in during the day, it ~~should~~ will be best to take it in a sitting posture with the neck as erect as possible, and the ~~feet~~ lower limbs placed horizontally upon a chair. This will prevent the swelling of the feet. If a recumbent posture be preferred for a nap during the day, all the ligatures upon the body should be ~~loosened~~ first unloosed. ~~before unless this sleep is than the body been from its~~ Unless this be done, sleep will be uneasy, and ~~followed~~

not refreshing. The persons who accom-
=pany surveyors into our woods, and who for a
while ~~refuse to take off their~~ lie down in their cloathes
when they sleep in the open air, ~~but~~ are
vouches for the truth of this fact, for which
~~the want of sound and refreshing sleep~~
reason they are soon obliged to ~~[illegible] to~~
~~[illegible] [illegible] [illegible] to~~
~~the practice of~~ take off their cloathes
to ~~sleep~~ lie in their blankets as they do
in their beds. Their sleep then becomes
easy and ~~reviving~~ restores the strength
and activity of their bodies. — ~~The~~ Sleep in
a horizontal posture of the body ~~in sleep~~
should be avoided for several hours
after a full meal whether it be a
dinner or a supper.

The System calls for different portions of Sleep in different ages, occupations & seasons of the year. ~~and at different times.~~

~~In Infancy~~ Sleep should fill up one half the time of Infancy, and more than a third of Childhood.

It should never exceed 7 or 8 hours in youth or middle life.—

In old age ~~it should~~ it should, ~~be~~ when practicable, be much longer. It should be taken early, and during the day as well as during the night.

Studious men require the ~~same~~ full portions of Sleep that are necessary in ~~each~~ youth and middle life. It is best taken in the early part of the night when the hours of study can be determined by our choice. ~~Professional men in the United States~~ Physicians who are unhappily precluded from this

conformity of their Systems to nature, ~~but~~ ~~they~~ suffer less ~~from~~ by neglecting it from the ~~constantl~~ constant exercise of their bodies during the day.

Labourers of all kinds require seven or eight hours Sleep.—

~~During the long~~ In consequence of the greater expenditure of the strength of the body by the ~~more~~ ~~active~~ violent labors, or ~~more~~ active exercises of Winter, and by the labors and heat of Summer, more Sleep is necessary in those Seasons than in the Spring and Autumnal months.—